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ABSTRACT

This final report explores four general areas on the financing of postsecondary education: (1) the costs and impacts of current governmental aid programs to postsecondary education; (2) the costs and impacts of alternative financing patterns in relation to national objectives for postsecondary education; (3) the nature and causes of financial distress in postsecondary educational institutions; and (4) the formulation of interim national uniform standards for determining the annual per-student costs of providing postsecondary education. Conclusions and recommendations are suggested in the area of postsecondary education in a changing society, objectives for postsecondary education, current financing patterns, assessing the achievement of the national objectives, the incidence of financial distress among institutions of postsecondary education, a framework for analyzing national policies for financing postsecondary education, an analysis of alternative financing plans, and national standard procedures for institutional costing and data reporting. Statistical data are included. (MJM)

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Financing Postsecondary Education in the United States

The National Commission on the Financing of Postsecondary Education

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
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Financing Postsecondary Education in the United States

**The National Commission
on the Financing of
Postsecondary Education**

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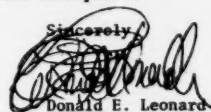
We are pleased to transmit the final report of the National Commission on Financing Postsecondary Education. The Commissioners were unanimous in their decision to adopt and submit this report.

In compliance with several charges given to the Commission in Public Law 92-318, the National Commission has considered and reported on four general areas: (1) the costs and impacts of current governmental aid programs to postsecondary education; (2) the costs and impacts of alternative financing patterns in relation to national objectives for postsecondary education; (3) the nature and causes of financial distress in postsecondary educational institutions; and (4) the formulation of interim national uniform standards for determining the annual per-student costs of providing postsecondary education.

To explore these areas in depth, the Commissioners had the support of more than two dozen full-time and part-time staff members who were chosen for their expertise (and experience) in several fields. Together, they brought diversity in specialization, backgrounds, and orientation. In addition, we benefited a great deal from the help of many of the nation's educators and government officials with whom we consulted.

The Commission will soon issue a series of additional staff studies that will supplement this comprehensive report with more detailed and technical material.

We consider it an honor to have served on this Commission and feel that its efforts will contribute to better decisions about financing the approximately 11 million students in some 10,000 institutions now comprising the postsecondary education enterprise.

Sincerely,

Donald E. Leonard
Chairman

Ben Lawrence, *Executive Director*

George Weathersby, *Associate Director*

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Many individuals, institutions, associations, and governmental agencies have contributed to the Commission's work. Numerous individuals and organizations have contributed written documents and testimony and have met with the Commission's staff to discuss their views. During the course of the year, the Commission's staff held seven open review sessions attended, at their own expense, by institutional and organizational representatives from all parts of the United States. These contributions have been particularly helpful to the Commission. The written statements submitted by a number of organizations have been collected and are available as a supplementary report. In addition, several thousand students completed questionnaires for the Commission dealing with current educational issues and the Commission's objectives, and many individual students provided constructive comments about the report in review sessions. These sessions have been most helpful in identifying critical factors that might otherwise have been overlooked.

Several organizations contributed data that served as the basis for the Commission's analysis. These include the Carnegie Commission; the College Entrance Examination Board; the Educational Testing Service; the state scholarship commissions in Washington, Oregon, California, Pennsylvania, and Illinois; the Council on Financial Aid to Education; the Bureau of the Census; the Federal Trade Commission; the Office of Management and Budget; and the National Center for Educational Statistics.

Data processing has been an especially important part of the Commission's support. The Commission is particularly grateful to James Jenkins of the Data Management Center of the Department of Health, Education, and Welfare; Sue Hais of the U.S. Office of Education; and Nick Corritori, Sally Bowman, and Nancy Curtis of the System Development Corporation, who gave willingly of nights, weekends, and holidays to ensure the flow of data and the availability of special data processing capabilities so vital to the Commission's work.

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INTRODUCTION

INTRODUCTION

Nearly three years ago, the Ninety-second Congress took up the task of reexamining the federal government's role in financing postsecondary education. During the preceding two decades, the federal role had expanded enormously. Starting with establishment of the National Science Foundation in 1950, which institutionalized the working relationships among the government, universities, and the scientific community that had developed during World War II, Congress passed an unprecedented series of laws that made the federal government a major partner in the financing of the nation's vast postsecondary education enterprise.

Among the major milestones were the extension of the G.I. Bill in 1972 to provide direct aid to thousands of student veterans, the National Defense Education Act of 1958 setting up the first federal student loan program, the Higher Education Academic Facilities Construction Act of 1963 providing federal aid to build classrooms to house the rapidly swelling enrollments of the 1960s, the Higher Education Act of 1965 authorizing major increases in student aid and institutional support, the Higher Education Amendments of 1968 strengthening several of the student aid programs and liberalizing support for classroom construction and library assistance, and the Health Manpower Act of 1968 extending federal aid to students and institutions in the health field. By 1970, federal aid to postsecondary education had risen to \$6 billion channeled through more than 300 programs administered by a dozen different departments and agencies.

The immediate task of the Ninety-second Congress was to review many of these programs, particularly those embodied in the Higher Education Act of 1965 and subsequent legislation, to determine which should be continued, which should be expanded, and which should be ended. In addition, there was strong interest in attempting to shape the multitude of federal aid programs into a more coherent statement of federal policy in this important field. State and local support for postsecondary education, driven by the surge of enrollment growth that occurred throughout the nation, had also risen sharply, and it had become increasingly important to mesh federal financing with state financing in support of basic national objectives.

As a consequence, a thorough examination of postsecondary education at the national level was conducted throughout much of 1971 and 1972. The plans, hopes, fears, and frustrations of students, educators, government officials, and many others were focused on the ensuing debate, which continued unabated into the final conference between the Senate and the House of Representatives to resolve the differences between the bills passed by the two houses. The principal product of this debate was the Education Amendments of 1972, an act which, among other provisions, extended many of the existing federal aid programs, added a new program of basic student grants for every high school graduate who wants to continue his or her education but lacks sufficient resources to do so, and encouraged the establishment of new planning structures at the state level to improve all forms of statewide planning for postsecondary educational systems.

During the debate that preceded passage of this act, however, Congress found that it could not resolve all of the points at issue. As a consequence, Congress added to the act a provision establishing a National Commission on the Financing of Postsecondary Education and charging the Commission with developing an analytical framework to be used to review existing financing programs and to recommend new financing methods and policies that would most effectively serve the national interest.

Specifically, the National Commission on the Financing of Postsecondary Education, as established by Public Law 92-318 (Section 140) and appointed by the President and Congress, was charged with studying:

The impact of past, present, and anticipated private, local, state, and federal support for postsecondary education.

The appropriate role for the states in support of higher education (including the application of state law on postsecondary educational opportunities).

Alternative student assistance programs.

The potential federal, state, and private participation in such programs.

The legislation left to the Commission the task of delineating the details of the study but listed several subjects to be included:

1. *The study shall determine the need, the desirability, the form, and the level of additional governmental and private assistance to postsecondary education.*
2. *It shall include at least:*
 - a. *An analysis of the existing programs of aid to institutions of higher education.*
 - b. *An analysis of various alternative proposals presented to the Congress to provide assistance to institutions of higher education.*
 - c. *An analysis of other viable alternatives of assistance to institutions of higher education.*
3. *The analyses under No. 2 shall include:*
 - a. *The costs of existing programs and alternative programs.*
 - b. *The advantages and disadvantages of each.*
 - c. *The extent to which each proposal would preserve the diversity and independence of such institutions.*
 - d. *The extent to which each would advance the national goal of making postsecondary education accessible to all individuals, including returning veterans having the desire and ability to continue their education.*
4. *In conducting the study, the Commission shall consider:*
 - a. *The nature and causes of serious financial distress facing institutions of postsecondary education; and*

b. Alternative models for the long-range solutions to the problems of financing postsecondary education with special attention to the potential federal, state, local, and private participation in such programs, including, at least:

- 1) The assessment of previously related private and governmental studies and their recommendations;
- 2) Existing state and local programs of aid to postsecondary institutions;
- 3) The level of endowment, private sector support, and other incomes of postsecondary institutions and the feasibility of federal and state income tax credits for charitable contributions to postsecondary institutions;
- 4) The level of federal support of postsecondary institutions through such programs as research grants and other general and categorical programs;
- 5) Alternative forms of student assistance, including, at least, loan programs based on income-contingent lending, loan programs which utilize fixed, graduated repayment schedules, loan programs which provide for deferment of all or part of repayment in any given year based on a certain level of a borrower's income; and existing student assistance programs, including those administered by the Office of Education, the Social Security Administration, the Public Health Service, the National Science Foundation, and the Veterans Administration; and
- 6) Suggested national uniform standards for determining the annual per-student costs of providing postsecondary education for students in attendance at various types and classes of institutions of higher education.

The legislation further required that "No later than April 30, 1973 [amended to December 31, 1973], the Commission shall make a final report to the President and Congress on the results of the investigation and study," with that report to include:

1. Findings and recommendations as the Commission deems appropriate, including recommendations for legislation; and

2. *Suggested national uniform standard procedures for determining the annual per-student costs of providing postsecondary education for students in attendance at various types and classes of institutions of higher education.*

Within sixty days from submission of the final report, "...the Commissioner [of Education] shall make a report to the Congress commenting on the Commissioner's suggested national uniform standards, and incorporating his recommendations with respect to national uniform standards together with any related recommendations for legislation."

To accomplish its task, the Commission was provided an appropriation of \$1.5 million. The Commission's first meeting was held on October 12, 1972 and its last, 14 months later, December 16, 1973. In its very earliest deliberations, the Commission determined that its primary responsibility was not to recommend a specific set of financing programs to the President and Congress but rather to develop and submit a comprehensive and systematic method for choosing among the many alternatives before Congress and the state legislatures for the financing of postsecondary education. In this way, the Commission's study has been unique among such studies at the national level, and to a great extent its contribution will only be determined by the ability and willingness of the federal, state governments, and other interested policy makers to make effective use of this proposed system for analysis.

The Commission met at least once a month in two- and three-day sessions throughout 1973, with more frequent meetings as its work approached completion. In addition, much of the Commission's work has been carried on by two committees, which also met at least once each month throughout the year. The Committee on Conditions, Definitions, and Expectations of Postsecondary Education, chaired by Vice-Chairwoman Marian W. La Follette, dealt primarily with the identification of the objectives of postsecondary education and the conditions within society and the enterprise itself of critical importance to its future development. The Committee on the Analysis of the Adequacy and Impact of Funding, chaired by George Kaludis, carried the primary burden for

directing the Commission's work on the analysis of current financing, on the development of the analytical framework for evaluating alternatives, and on the analysis of problems of costing and related information needs regarding postsecondary institutions.

The report that follows is organized into nine chapters. In the first chapter, the term "postsecondary education" is defined for the purpose of the Commission's study. This is followed by a discussion of a number of assumptions regarding conditions within society and within postsecondary education that are likely to be of particular significance for financing policies during the next two decades. The second chapter outlines a series of basic objectives for postsecondary education as determined by the Commission. The third and fourth chapters provide a description of the current pattern of financial support and a discussion of the extent to which the objectives are being achieved. The fifth chapter, in response to a specific directive from Congress, deals with the question of financial distress among postsecondary educational institutions.

The sixth chapter presents a description of the analytical framework developed by the Commission to evaluate the effectiveness of alternative financing plans for postsecondary education in achieving national objectives in comparison with the level of financing needed by each plan. It is this section of the report that the Commission believes to be of fundamental importance in answering its charge from Congress. The seventh chapter applies the analytical framework to a variety of alternative financing plans and mechanisms. The eighth chapter discusses the uses of uniform national procedures for determining per-student costs. It also discusses the development of other information to improve institutional accountability. The final chapter presents a summary of the Commission's conclusions and a listing of the recommendations that follow from those conclusions.

In carrying out its responsibility, the Commission has relied heavily upon the work of earlier commissions, state study groups,

private agencies, and individual researchers, rather than undertaking extensive original research of its own into each of the topics before it. In part, this was because the Commission worked under strict time constraints. But more important, the Commission strongly believed that it should utilize and build upon the work of other public and private agencies rather than duplicate what had already been accomplished. Among the works that the Commission has consulted are the many volumes published by the Carnegie Commission, the *Report of the Assembly on University Goals and Governance*, and *Report on Higher Education* issued by the Newman Commission, the report of the Commission on Human Resources and Advanced Education, a large number of major studies undertaken by individual states over the past five years, and several major international reports on postsecondary education. The Commission is deeply indebted to the authors of those reports.

CHAPTER 1

POSTSECONDARY EDUCATION
IN A CHANGING
SOCIETY

POSTSECONDARY EDUCATION IN A CHANGING SOCIETY

The term "postsecondary education" has not surprisingly eluded a firm and generally accepted definition. To some, the term is synonymous with "higher education." To others, it encompasses the whole spectrum of institutions, agencies, and activities that are concerned in some fashion with education beyond the high school level. Thus, the Commission's first task was to identify the institutions, programs, and activities that make up postsecondary education in the broadest sense and then to develop a practical working definition of the term to guide the Commission's study.

Congress used the term in the Education Amendments of 1972 to indicate that the federal interest extends beyond the traditional institutions of higher education to include public and private occupational schools and, possibly, the host of postsecondary educational programs offered by research organizations, occupational training agencies, private associations, and other groups. The Commission shares this view and, as a result of its investigations, has concluded that postsecondary education consists of four major sectors: a collegiate sector, a noncollegiate sector, a third sector made up of all other postsecondary institutions, and a fourth sector encompassing the vast array of formal and informal learning opportunities offered by agencies and institutions that are not primarily engaged in providing structured educational programs.

Collegiate Sector

In 1972-73, the collegiate sector consisted of 2,948* public and private institutions of higher education—including community colleges, four-year liberal arts colleges, major research universities, and professional schools—which enrolled over nine million students.¹ (See Table 1.) These are the institutions upon which state, local, and federal interest traditionally has been focused.

Although this sector has undergone several periods of rapid growth over the past 200 years, none was equal to that which took place in the 1960s. During that decade, the number of collegiate institutions increased by more than 500; and enrollment more than doubled, rising from 3.6 million in 1960 to 8 million in 1970. This unprecedented growth involved nearly every kind of collegiate institution; but the greatest expansion occurred among the principal public institutions: two-year community colleges, four-year state colleges, and universities. As a consequence, the public institutions, which as recently as 1950 enrolled little more than half the total number of students attending collegiate institutions of all kinds, enrolled 76 percent of all collegiate students in 1972.

Among those students who were enrolled during 1972-73 for degree credit, approximately 22 percent were enrolled in two-year colleges, and 78 percent were enrolled in four-year institutions. About 11 percent were enrolled as graduate students and 89 percent as undergraduates or in the first year of professional training. Approximately 58 percent were men, and 42 percent were women. Among those students who were enrolled in public institutions, nearly two-thirds were enrolled as full-time students; among those in private institutions, three-fourths were enrolled full-time.

*This is the total number of collegiate institutions that responded to U.S. Office of Education surveys.

Table 1-1: Collegiate Sector of Postsecondary Education:
Institutions and Enrollment, by Type of Institution,*
1972-73

Institutional Type	Institutions			Enrollment**		
	Public	Private	Total	Public	Private	Total
Leading research universities.....	26	20	46	809,701	230,056	1,039,757
Other research universities.....	30	18	48	602,475	156,769	769,244
Large doctorate granting institutions.....	23	12	35	299,662	135,762	435,424
Small doctorate granting institutions.....	22	14	36	279,612	109,270	388,882
Comprehensive colleges with substantial program offerings.....	214	92	306	1,787,193	421,618	2,208,811
Comprehensive colleges with limited program offerings.....	114	57	171	471,327	129,258	600,585
Highly selective liberal arts colleges.....	1	144	145	2,246	190,144	192,390
Other liberal arts colleges.....	31	537	568	57,271	467,305	524,576
Two-year colleges and institutions.....	882	251	1,133	2,671,377	129,278	2,800,655
Divinity schools.....	0	219	219	0	65,989	65,989
Medical schools and centers.....	30	15	45	54,940	9,675	64,615
Other health professions schools..	6	21	27	3,585	9,734	13,319
Schools of engineering and technology.....	7	32	39	20,829	52,212	73,041
Schools of business and management.....	1	26	27	13,821	41,168	54,989
Schools of art, music and design..	4	48	52	2,525	32,891	35,506
Schools of law.....	1	10	11	1,525	9,302	10,827
Teachers colleges.....	1	7	8	1,063	8,360	9,423
Other specialized institutions....	17	15	32	38,392	8,526	46,918
TOTAL.....	1,410	1,538	2,948*	7,127,544	2,207,407	9,334,951

Source: Carnegie Commission of Higher Education, *Classified List of Educational Institutions*, 1973; U.S. Office of Education, *Opening Fall Enrollment, 1972-73*, a preliminary report.

*Branch campuses are treated as separate institutions. The Higher Education General Information Survey (HEGIS) total, which does not count branch campuses separately, is 2,686.

**Individuals.

Of the 1,193 public institutions, the majority, 849, were operated by the states; 335 were predominantly local institutions; and 9 were federal institutions.

Noncollegiate Sector

The noncollegiate sector of postsecondary education is made up of an estimated 7,016 occupational schools, which enrolled approximately 1.6 million students in 1972-73. Many of these schools are called "colleges," and some give fully accredited degrees.² All are either accredited by a federally-recognized accrediting agency (approximately 1,600 fall into this category) or have been otherwise classified as eligible for participation in the federal Veterans' benefits or Social Security student-aid programs.

These schools, which have been classified under nine different headings by the U.S. Office of Education (see Table 2), provide occupational training intended primarily for students whose immediate interest is employment in a specific trade or industry. Some are public institutions—for example, trade and technical schools serving particular industries—but the great majority are private institutions. A relatively small percentage of these private institutions are operated as nonprofit organizations. The majority are operated for profit and are managed by corporations (66 percent), partnerships (18 percent), or single proprietors (16 percent). Among these proprietary schools, more than half are cosmetology or flight schools.³

Because the noncollegiate sector has so long been ignored by the public and private agencies that collect data on postsecondary education, there are no reliable figures on the distribution of students by age or sex or program; nor are there figures indicating changes in enrollment. This Commission, the Carnegie Commission, and the U.S. Office of Education have begun a data collection effort, however, that

Table 1-2: Noncollegiate Sector of Postsecondary Education, Estimated Number of Institutions by Type and Control, 1970-71

Institutional Type	Public	Pro- prietary	Non- profit	Sec- tarian	Total
Technical/Vocational...	560	423	40	4	1,027
Technical Institutes...	122	161	23	0	306
Business/Commercial....	5	940	20	2	967
Cosmetology.....	4	1,475	2	0	1,481
Flight School.....	3	1,332	10	0	1,345
Trades Schools.....	54	509	34	0	597
Correspondence.....	0	112	1	1	114
Hospital Schools.....	118	47	681	288	1,134
Other.....	15	20	10	0	45
Total.....	881	5,019	821	295	7,016

Source: Adapted from U.S. Office of Education, National Center for Educational Statistics, *Directory of Postsecondary Schools with Occupational Programs, 1971* (Washington, D.C., 1973), Table 3, p. xix.

within a year should begin to provide useful information regarding the students and institutions in this sector.⁴

Other Postsecondary Institutions

There is an additional number of postsecondary schools—roughly estimated at 3,500—that offer formal learning opportunities in a wide variety of vocational and recreational fields. These institutions are not included within the noncollegiate sector solely because they have not become eligible for participation in a federal student-aid program of any kind. Among them are schools that teach foreign languages, professional modeling, and real estate sales, as well as recreational

schools teaching such skills as social dancing, skiing, swimming, and mountain climbing. Although some are licensed by state agencies that enforce professional and vocational standards, there is at present no comprehensive listing of these institutions apart from the yellow pages of the telephone directory for each community. Data on their enrollments, programs, and financing are also unavailable in any standardized and reliable form.

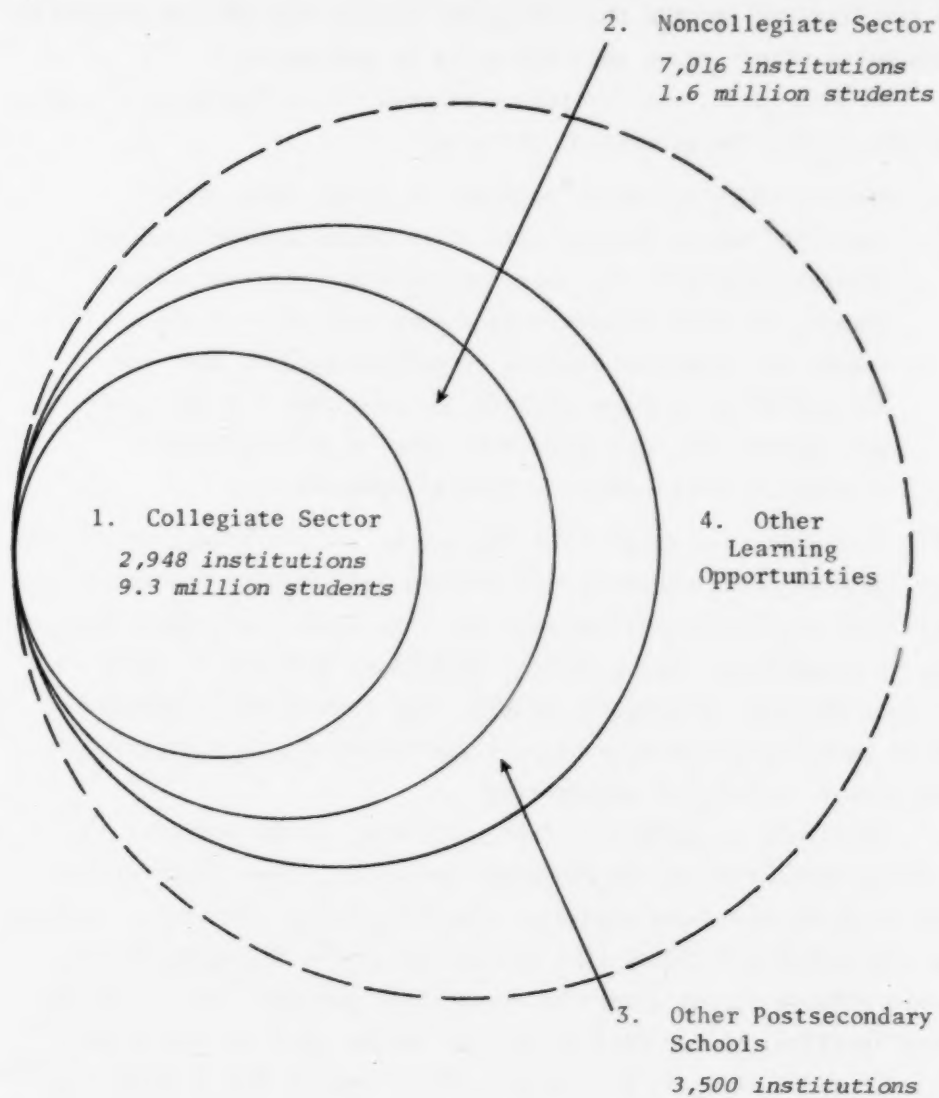
Other Learning Opportunities

Finally, there are many formal and informal learning opportunities offered by such organizations and groups as churches, libraries, museums, art galleries, labor unions, public radio and television, civic organizations, industrial organizations, professional associations, and chambers of commerce throughout the nation. Again, there is no comprehensive listing of such opportunities; nevertheless, they are unquestionably an important part of postsecondary education for many Americans. It has been estimated that in 1971-72 over 32 million people aged 18 through 60 participated in some form of formal learning opportunity of this type.⁵ In addition, virtually every individual in the United States has access to informal learning opportunities offered by books, newspapers, television, radio, records, and tapes, as well as cultural institutions such as zoos, theaters, concert halls, botanical gardens, and historical monuments. (See Figure A.)

A Working Definition of "Postsecondary Education"

The scope of the postsecondary educational enterprise is indeed very broad, and this Commission could not and was not expected to examine the financing of all of its components. For very practical reasons, therefore, including the need for relatively firm data on income, expenditures, and enrollment, the Commission developed a working definition of "postsecondary education" that excluded many of the learning opportunities described above. In adopting this working definition,

Figure 1-A: The Postsecondary Education Enterprise, 1972-73



the Commission sought to: (1) respond to the requirements set by Congress in authorizing the study; (2) include postsecondary education provided by institutions outside the collegiate sector; and (3) set realistic boundaries within which analysis could be undertaken.

On this basis, the Commission adopted the following as a working definition for the purpose of its study:

Postsecondary education consists of formal instruction, research, public service, and other learning opportunities offered by educational institutions that primarily serve persons who have completed secondary education or who are beyond the compulsory school attendance age and that are accredited by agencies officially recognized for that purpose by the U.S. Office of Education or are otherwise eligible to participate in federal programs.

This definition encompasses the collegiate and noncollegiate sectors but excludes other postsecondary schools and learning opportunities. Together, the collegiate and noncollegiate sectors encompass approximately 9,960 public and private institutions that enroll about 10.9 million students in programs ranging from cosmetology to graduate level chemistry, from accounting to architecture, from English composition to electrical engineering.

It should be emphasized that, although, in the Commission's working definition of postsecondary education, these institutions and students have been separated into two sectors; there is, in fact, no indisputable dividing line between the two with regard to programs offered or the manner in which those programs are presented. Many institutions may fall clearly in one category or the other, but the distinction is blurred for others and is more a matter of management or ownership than of function or program.

Changing Institutions in a Changing Society

It would be a serious mistake to assume that the society served by postsecondary institutions and the institutions themselves will not undergo significant changes over the next two decades. Such changes will occur, and they will have an important bearing upon the level and structure of public and private financial support that is necessary to serve local, state, and national interests. It is impossible, of course, to predict with any certainty what those changes may be; but it is essential to any attempt to determine the most effective methods of financing postsecondary education to consider carefully the most significant trends that can now be discerned.

Accordingly, the Commission has reviewed much of what has been written and spoken on this subject in the past several years and has attempted to isolate what, in its opinion, may be the most important of these changes insofar as the financing of postsecondary education is concerned. In several cases, the extent and direction of change are far from clear, but it is nevertheless evident that changes are taking place and that they must be taken into account. The most important of these changes concern:

1. Enrollment stabilization;
2. The postsecondary student mix;
3. Intersegmental enrollment shifts;
4. Age of majority;
5. Personnel needs;
6. Student attitudes;
7. Public services;
8. Nontraditional education;
9. Constraints on new programs
10. Faculty collective bargaining;
11. Educational technology;
12. New high school curricula;

13. Institutional costs and productivity;
14. Federal support for postsecondary education; and
15. Trends in state support.

Some of these developments reflect changes in the society as a whole that are well beyond the direct influence of the postsecondary educational institution. But others—the student mix, the development of nontraditional education, and the growth of educational technology, for example—will be strongly influenced by institutional policies.

1. Enrollment Stabilization

Total enrollment of students from the traditional college-age group (18-24) in the collegiate sector of postsecondary education will probably continue to increase during the 1970s, but at a rate much reduced from that of the 1960s. Throughout the 1980s, enrollment of such students is likely to decline. Data necessary to project enrollment from other age groups and in the noncollegiate sector are not available.

The latest enrollment projections by the U.S. Office of Education indicate that total enrollment in the collegiate sector (degree and nondegree credit) will continue to grow in the decade of the 1970s but at about one-third the rate experienced in the 1960s.⁶ In absolute numbers, the projections show an average annual growth of 194,000 students for the 1970s, compared with an average annual growth of 450,000 students in the 1960s. (See Table 3.) This is still a substantial increase, particularly for the two-year colleges, which are expected to experience a 62 percent enrollment growth between 1970 and 1980.⁷ But against an enrollment base that is much greater than that of 1960, this rate represents a rather sudden slowing of growth in the collegiate sector.

Table 1-3: Enrollment Projections for the Collegiate Sector,
Degree and Nondegree Credit, Fall 1970 to 1990
(Individuals)

Year	Office of Education ¹	Carnegie Commission ²	Census Series E-2 ³
1970	8,581,000	8,499,000	-
1975	9,802,000	-	9,147,000
1980	10,517,000	11,446,000	10,284,000
1985	-	-	10,207,000
1990	-	10,555,000	10,397,000

Source: ¹U.S. Office of Education, National Center for Educational Statistics, 1973.

²Carnegie Commission Projection II, *Priorities for Action: Final Report of the Carnegie Commission*, 1973.

³U.S. Bureau of the Census, "Population Estimates and Projections: Projections of School and College Enrollment, 1971-2000" (January 1972), mid-range estimate.

A projection prepared for the Carnegie Commission in 1973 also indicates a sharp slowdown in enrollment growth in the collegiate sector through 1980, followed by an absolute decline in enrollment for the period of 1980 to 1990.⁸ A similar trend is indicated in the most recent projections of school and college enrollment by the Bureau of the Census.⁹ The Census projections indicate that enrollment in 1990 will be approximately the same as in 1980, however, while the Carnegie projection shows an absolute decline of nearly 900,000 students.*

All three of these projections reflect two important assumptions. The first is that the high school graduation rate, which rose rapidly over the past two decades, will have slowed considerably by 1990, when approximately 90 percent of those in the 17-18 age group are expected to be high school graduates.¹⁰ Second, the percentage of the

*This is one of three projections presented by the Carnegie Commission in its final report entitled *Priorities for Action*.

population in the traditional college-age group, a figure that also grew rapidly over the past two decades, is similarly expected to grow much more slowly over the remainder of this decade, and to decline sharply between 1980 and 1990. According to the Bureau of the Census, there may be a drop of as much as 26 percent in the number of persons 18-21 years old enrolled in that decade.¹¹

It is primarily the combination of these two factors that is expected to result in the slowdown of enrollment growth in the collegiate sector during the 1970s and the possible decline in enrollment for several years after 1980. A third factor, the college-going rate for high school graduates, apparently has played a relatively minor role in the past and is not expected to become more important in the future. Recent data indicate that the college-going rate has risen slowly during the past two decades and may decline somewhat during the next two decades, as a decline in the rate for males is only partly offset by a slight increase for females.¹²

Unfortunately, these projections concern only the collegiate sector of postsecondary education and say nothing about the non-collegiate sector. Data on enrollment in the noncollegiate sector are too limited to support a firm conclusion that enrollments are rising, falling, or remaining relatively stable. In the absence of better data, it is assumed that enrollment in the noncollegiate sector will generally grow at approximately the same rate as enrollment in the collegiate sector, except that it may undergo periodic fluctuations that primarily reflect changing economic conditions.¹³ Institutions in these two sectors are similar enough to attract students with comparable interests, particularly as state and federal student financial aid becomes available to students in the non-collegiate sector to the same extent that it is available to students in the collegiate sector.

2. Student Mix

Ethnic and racial minorities, persons from low-income families, older persons, and women will make up an increasing proportion of total enrollment in postsecondary education.

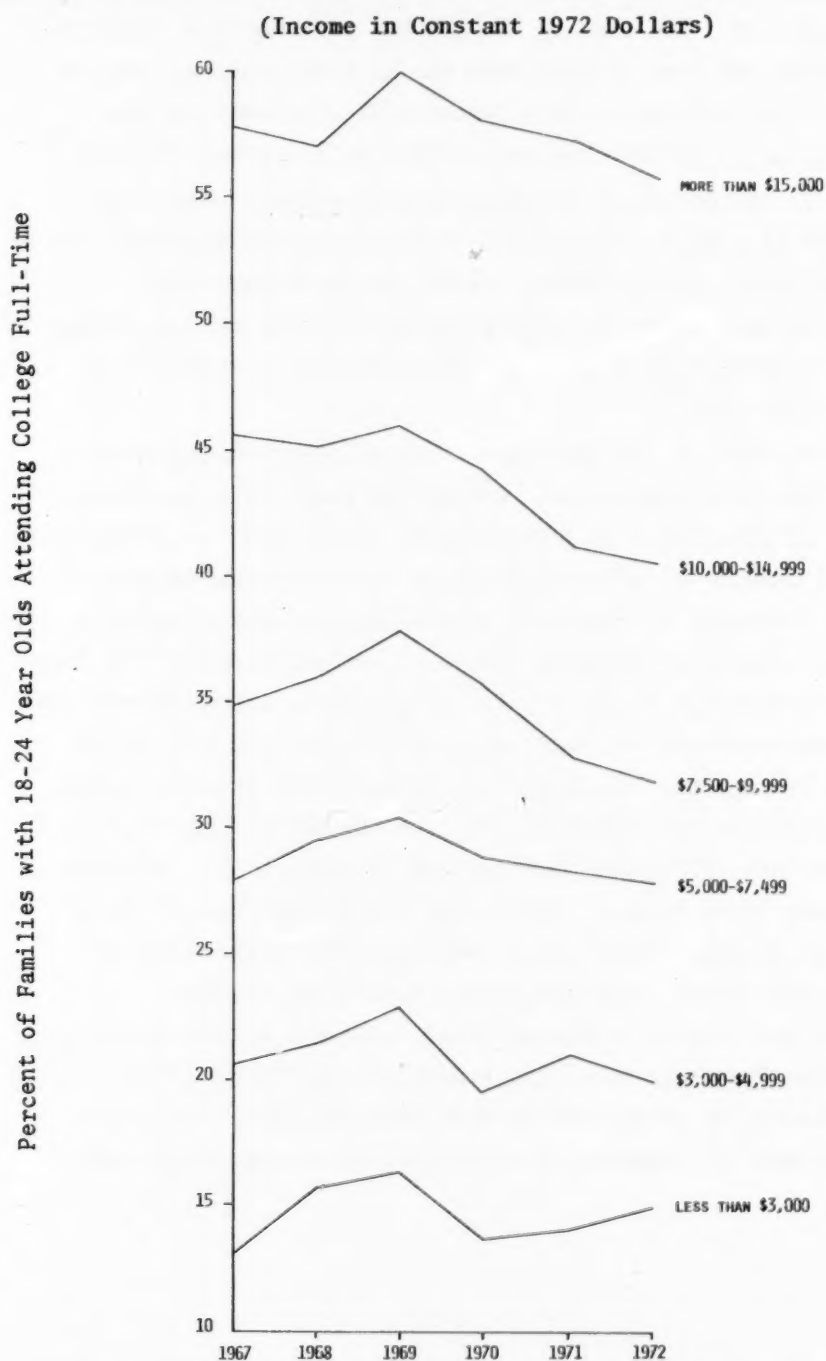
During the past fifty years, postsecondary education has grown from an enterprise that primarily served an educational and professional elite to one that is of service to an increasingly broad cross-section of the population. Approximately one of every two high school students will go on to some form of postsecondary education, and nearly half of those who do will graduate from a college or university. The college-going rate has nearly doubled in little more than two decades,¹⁴ largely as a result of an increasing rate of high school graduation. According to many observers, postsecondary education is now moving into a period of "universal access."¹⁵

An important part of this change, especially over the past five years, has been the increasing participation by students who are members of ethnic and racial minorities. The figures are not strictly comparable; but it is worth noting that, whereas nonwhite students made up only 5.7 percent of enrollment in collegiate institutions in 1965, they made up 8.6 percent of first-time students in 1971.¹⁶ This is a small gain, to be sure, and nearly all racial and ethnic minority groups remain seriously underrepresented in the collegiate sector. But there is other evidence to suggest that the college-going rate among minorities, which has been well below that of the white majority, is increasing while the rate for whites is declining. And there is further evidence that the rate for minorities will continue to rise if high school graduation rates also increase as they have in recent years.¹⁷

The civil rights legislation of the 1960s undoubtedly played a major role in bringing about a sharp rise in the educational aspirations and expectations of minority students by substantially increasing their opportunities for full participation in the nation's economic and political life. This change has received further encouragement from state and federal programs intended to reduce financial and other barriers to education beyond high school. There is every reason to believe that the proportion of minority students going on to some form of postsecondary education will continue to grow unless there are unanticipated reductions in these state and federal programs. Large numbers of these students will enroll in two-year colleges, contributing to the continuing growth in enrollment at such institutions. Many two-year, open-door colleges have had difficulty in moving proportionate numbers of minority students on to four-year institutions, however, so that the impact on four-year colleges and universities may be much less.¹⁸

There has been a modest increase in participation rates for students with family incomes below \$3,000, regardless of ethnic or racial background, over the past five years (see Figure B). But there has been no sustained gain for students in the income group from \$3,000 to \$7,500 (above that level participation rates have declined since 1969). Many of the programs that aid minority students are primarily intended to aid low-income students, because a disproportionately high percentage of low-income students are members of ethnic or racial minorities. There is some evidence that these programs helped to increase participation rates for low-income students up to 1969; but as spending has been held back, further progress has also been curtailed. In addition, low-income students have been aided by the rapid growth of public two-year colleges, which commonly charge low tuition, require at most a high school diploma for admission, and are located so that they are more accessible to low-income persons than are most four-year institutions. According to the most recent data, however, a higher proportion of the enrollment in four-year colleges is low-income students than the proportion of low-income students in two-year colleges.

Figure 1-B: Participation Rate of 18-24 Year Olds by Family Income, 1967-72



Source: U.S. Bureau of the Census, unpublished data.

Data on the enrollment of women indicate that women also are significantly underrepresented in relation to their percentage of the total population. Yet the gap between the participation rates for men and women has been closing over the past two decades, and, as a result, women accounted for 41 percent of enrollment in the collegiate sector in 1972 compared with only 32 percent in 1950.¹⁹ According to the Office of Education's projections, women will account for 51 percent of the gain in enrollment expected for the collegiate sector in the 1970s. Recent Census Bureau data indicate, however, that the college-going rate for men has dropped to about 37 percent while the rate for women has leveled off at about 34.5 percent.²⁰

Current data on the age composition of postsecondary enrollment are even less conclusive. On the one hand, there has been a good deal of discussion in recent months of the need to accommodate increasing numbers of older students in line with the concept of life-long learning, the need for retraining, and the acceptance of greater numbers of students for part-time enrollment. The fact that the average age of the population generally is rising and that the average work-week for many employed persons continues to be shortened has led many observers to conclude that a larger number of older persons will find their way into postsecondary institutions, and into collegiate institutions in particular. And many institutions have, in fact, found that the average age of their students is rising. There are no national time series data on the age distribution of postsecondary enrollment to show whether or not this is a general trend. Surveys by the Office of Education show that part-time collegiate enrollments fell from 30 percent to 28 percent between 1961 and 1971. But part-time enrollment is expected to rise again to 36 percent by 1980.

3. Intersegmental Enrollment Shifts

Important shifts in enrollment within each sector of post-secondary education and among the sectors will continue, reflecting changes in social and economic conditions and in public attitudes regarding education.

Important shifts in enrollment have occurred in the past as a result of changes in student interests and objectives, changes in the relative costs of attending different types of institutions, the establishment of new institutions and new programs, and changes in the amount and types of financial aid available to students. Such changes will certainly continue to occur, although their direction and magnitude are not predictable with any certainty. Within the collegiate sector, public institutions will grow faster than private institutions, unless there is some strong intervention by the federal or state governments. This growth pattern is a result of the continuing tuition gap between public and private institutions, the small number of private institutions in several states in which there will continue to be population growth, and the continuing popularity of public two-year colleges. The magnitude of growth may not be great for public institutions, however, and especially for public four-year colleges and universities, which now seem to be experiencing the largest reductions from their projected enrollments.²¹

Public two-year colleges are likely to grow more rapidly than any other segment of the collegiate sector. Recent enrollment projections for the collegiate sector as a whole reflect the assumption that these institutions will add approximately 60 percent as many new students during the decade 1970 to 1980 as they did in the preceding decade.²² This trend is likely to end sooner only if the costs of attending such institutions are raised sharply or if their admissions requirements are tightened.

There is also reason to believe that the shift in enrollment from rural to metropolitan institutions, which is now causing serious problems in several states, will continue. This shift is partially explained by the long-run movement of population from rural to urban and suburban centers. But it also results from the fact that many of the new two-year colleges have been purposefully located in metropolitan centers and that a large proportion of the new students prefer to go to school close to where they live (and often, also, close to where they work).

Whether there may also be a shift in enrollment from the collegiate to the noncollegiate sector is not at all clear. Figures on current enrollment in the noncollegiate sector represent only the roughest estimates, and there are no reliable, comprehensive figures on enrollment in the recent past from which trends may be discerned.²³ As noted earlier, however, the noncollegiate institutions may share in the growth expected for two-year collegiate institutions, particularly if student aid becomes available in larger amounts for students who attend proprietary schools. The fact that 24 percent of veterans studying under the G.I. Bill in 1972 chose to enroll in noncollegiate institutions, compared with approximately 15 percent of all students, suggests that, if additional aid is provided for students in the form of an entitlement, as under the new Basic Educational Opportunity Grants program,* a larger percentage of other students may also enroll in such institutions.

Some educators believe that an increasing number of students seek to obtain the skills they need for employment without the necessity of obtaining a general education as well. These students are said to be attracted to institutions that make fewer demands than do the traditional collegiate institutions with respect to previous academic achievement, admissions procedures, and standard rates of progress. Moreover, such students may be attracted by the noncollegiate sector's promise not only to train students in marketable skills but also to help them find employment once they

*See Chapter 7 for a discussion of BEOGs.

have obtained those skills. On the other hand, however, veterans make up more than one-third of the total enrollment in the non-collegiate sector, and, as their number decline, the noncollegiate institutions will have to attract a large number of new students simply to maintain their current enrollment levels.

4. Age of Majority

Court decisions regarding residency requirements are likely to have an impact on institutional and student-aid financing, and the magnitude of the probable impact has been increased by adoption of the 26th Amendment to the Constitution and state actions reducing the age of majority for many purposes from 21 to 18.

For a number of years, it has been argued in the courts that the states may not lawfully discriminate between residents and non-residents in charging tuition. To date, the courts have decided these cases in favor of the states, allowing them to continue to charge nonresident students higher tuition (usually an approximation of the average direct costs of instruction) than they charge residents.²⁴ The question has been given a new dimension, however, by court decisions reducing the maximum residency requirement for voting to 30 days, inasmuch as residency for voting has been a key ingredient in determining residency for tuition. Other complicating factors have been the adoption of the 26th Amendment to the Constitution, which has reduced the minimum voting age in national elections from 21 to 18, and subsequent actions by the states not only to reduce the minimum age in state elections but to lower the age of majority for several other purposes as well.

It has been argued that the effect of the court decisions and changes in law is to make it possible for students 18 years old or older to establish residence in a state within one month. If the courts were to agree, many states, and especially those that attract a large proportion of students from other states, will suffer substantial losses in out-of-state tuition revenue. The total potential loss for all states has been estimated to be \$200 million.

But there is a second and still more important potential consequence, which concerns student financial aid. A significant proportion of federal student aid (notably excluding Veterans' and Social Security benefits) and nearly all state grants to students are allocated on the basis of financial need, taking into account the annual income (and in some cases estimated assets) of their parents. If students are classified as adults at age 18 rather than 21, it may not be possible to continue to treat them as dependents of their parents in this fashion. Thus, it may become necessary to exclude parental income from consideration. If so, the number of students with financial need under current standards and the amount of their need may rise, forcing governments either to abandon financial need as a criterion or to develop an entirely new standard based on the financial resources of the students alone.

At present, it is impossible to predict how or when these issues are likely to be decided. But the potential consequences are great, and much that is said later in this report may be affected.

5. Personnel Needs

The needs of the states and the nation for trained personnel will continue to change, requiring new programs and combinations of programs of postsecondary education that cannot now be foreseen.

Postsecondary educational institutions are by their very nature the principal suppliers of skilled personnel for government, business, professions, the sciences, the public schools, and technical occupations. From the colonial period to the early 1800s, their responsibility was largely limited to training lawyers, physicians, and clergymen. But, by the end of the nineteenth century, they had been given the major responsibility for providing the teachers,

engineers, home economists, agricultural scientists, and other skilled persons demanded by the nation's growing economy. In this century, they have also been called upon to help train business managers, military leaders, research scientists, college teachers, social scientists, government officials, international relations experts, a great variety of technicians, and others with special skills sought by private and public employers.

In general, the institutions have responded very well to the shifting demands for trained personnel as those demands have become recognized. Unfortunately, however, new work-force requirements have proven difficult to foresee, and the duration of demand has been hard to predict accurately. Thus, the collegiate institutions, for example, have found themselves heavily pressured in recent years to meet an unforeseen demand for teachers, engineers, area specialists, and certain kinds of scientists, only to discover a few years later that the supply has begun to exceed demand, with the result that many students have been trained for nonexistent jobs.

Evidently, postsecondary institutions will have to develop a greater capacity for expanding and contracting their professional and occupational training programs according to continuing measures of demand, rather than relying heavily upon forecasts of work-force needs as guides to program planning. And they will have to develop further their capacity both to retrain persons whose jobs have disappeared as a result of changing markets and technology and to provide further training for those who will need to return to school to keep pace with advances in their fields.

6. Student Attitudes and Responses

Student attitudes regarding postsecondary education will have a substantial impact on the types of programs offered and the ways in which they are offered.

There has been considerable controversy in recent years about how large a part the principal "consumers" of postsecondary education—students—have played and should play in determining the character of the education they receive. Students have argued rather convincingly that to date they have frequently been ignored on matters of great importance to them and that the "system" is notably resistant to making changes they have sought. This viewpoint is supported by the findings of the Newman task force, which emphasized in its report the high percentage of college and university students who leave school before graduation, often before completing more than a year or two of study.²⁵ The high dropout rate, the Newman task force said, reveals "an educational problem of considerable proportions. College is failing to capture the attention and engage the enthusiasm of many students."²⁶ A recent survey conducted for the Carnegie Commission indicates a very high overall level of satisfaction among undergraduates.²⁷ Yet, the same survey indicated that 90 percent of the students believed that course work should be more relevant to contemporary life and problems and that 83 percent believed that more attention should be given to students' emotional development.

Many students are also interested in getting the training needed for employment, however; and in this regard there is considerable evidence that postsecondary educational institutions, particularly the occupational schools of the noncollegiate sector and the two-year community and technical colleges, make a real effort to provide marketable skills. What is generally lacking is an adequate counseling program for students who may not have realistic ideas about the job market.

There is some evidence that postsecondary institutions are becoming more responsive to student attitudes in other areas, also. One indication is that educators have shown a growing interest in learning what students are thinking about. Another is that students,

determined to have their views considered, are employing many of the same means that faculty and administrators have used to accomplish that end. Moreover, it seems clear that in a period of declining enrollment, students will be able to make their views known and felt by their choices of institutions and by their choices of programs and faculty once they are enrolled. Few institutions will be in a position to ignore the opinions of students who thus evidence their determination to receive the educational experiences they desire.

Particular attention will have to be given the new students, especially minority students and those from low-income families. Most of the traditional institutions of higher education have found themselves ill-prepared to deal with large numbers of these students and to provide the kinds of counseling and other assistance necessary to ensure that they are provided with more than just the opportunity to be admitted to postsecondary institutions previously closed to them. Clearly, the fact that these students will make up a growing proportion of total enrollment in the future means that the institutions will have to redouble their efforts to provide true equality of opportunity through the programs they offer. As one writer has observed, "The task for the future is to design educational institutions and programs to fit the characteristics and needs of students in a new era of egalitarianism."²⁸

7. Public Service

Society will continue to make heavy demands upon postsecondary education to help resolve changing contemporary social, economic, political, and technical problems.

The collegiate sector of postsecondary education has just begun to emerge from a period during which it not only had to cope with a massive surge of new students but also was expected to play a major role in the resolution of a vast range of social, economic, political, and technical problems. For a time, the colleges and universities

were sufficiently successful in meeting these challenges to lead many to believe that higher education had become the pivotal institution in society, and that there were few, if any, social, economic, and political problems that could not be solved through concentrated application of the resources commanded by the universities.²⁹

Accordingly, the demands grew until, in the mid-1960s, they far surpassed the ability of the institutions to meet them, and a strong sense of disillusionment set in—a disillusionment that was to be shared by students, legislators, parents, taxpayers, and educators. This phase, which lasted through 1970, is now being replaced by what has been termed a "new era of realism" that is characterized by "serious" efforts to analyze present and future demands and to respond with practical solutions.³⁰

This is not to say, however, that society is likely to allow the colleges and universities to return to the sort of tranquillity they have often enjoyed in the past. Advanced knowledge remains a key ingredient in the solution of pressing social problems, and most of the problems that confronted this country in the 1960s remain unresolved today. Thus, it is evident that society will continue to demand that institutions of postsecondary education participate to the extent of their ability in dealing with these problems. The concept of service to the community that began with the land-grant movement is still very much alive.³¹ Crime, poverty, congestion, the energy crisis, foreign policy problems, environmental destruction, and inequality of opportunity, together with new problems not now perceived, are certain to pose serious challenges during the next twenty years. Institutions of postsecondary education will be called upon to provide graduates trained to deal with these matters, to undertake research that will expand our basic knowledge in critical areas, and, in cooperation with other institutions, to see that the new knowledge is effectively applied.

8. Nontraditional Education

A growing number of off-campus educational programs will be available to students of all ages in their local communities, in their homes, and at their places of work.

The present system of postsecondary education, particularly the collegiate sector, is, as the Newman task force observed, "oriented to the young and the mobile."³² Although extension courses, part-time enrollment, internships, and evening programs have grown significantly over the past two decades, postsecondary education remains firmly rooted in the campus, whether it be a college or a university or a proprietary school. The Newman task force has proposed that, in order to reach many potential students who are now inadequately served or not served at all, the resources for postsecondary education be provided "to the community as separate services in order that individuals and groups can find their own way to an education."³³ Others have made similar proposals in the past several years and, in fact, a strong impetus has developed behind expansion of credit by examination, "open" universities, the "external degree," and other forms of what has been termed "nontraditional" education.

Thus, a major movement appears to be underway, one that is likely to continue at least through the 1970s. Yet there are many formidable obstacles to this movement: the problem of accreditation for off-campus programs, resistance from those who fear that the limited resources will be drawn away from traditional programs, the necessity for careful planning, and what one observer has described as a tendency to "talk the nontraditional concept to death" before it has really been tried.³⁴ Perhaps the most important obstacle of all, however, is uncertainty about the real demand for off-campus programs. Several recent surveys have indicated that there are a great many persons of all ages who would like to participate in various forms of off-campus learning. But it is not certain that when these persons are forced to make real decisions about how they

will spend their time and money, they will give education priority over additional employment, recreation, and other alternatives.

If an increasing number of persons are to be brought into postsecondary education for part-time study on or off campus, it will be essential that federal student aid programs treat part-time students equally (on a pro rata basis) with full-time students.

9. Constraints on New Programs

The projected slowdown in enrollment growth will reinforce institutional impediments to the development of new programs and new methods of delivery.

Growth in any enterprise often gives its leaders an opportunity to develop new methods of operation and new programs that would not be possible in its absence. On the surface, at least, this observation seems particularly true of the collegiate sector. Leadership responsibilities are shared by faculties, administrators, governing boards, public officials, and, in a few exceptional cases, students. As a result, decisions to undertake new programs or adopt new methods must go through many channels, and those with a vested interest in "traditional" programs and methods often seem to have the advantage. If financing for current operations and capital outlay is closely tied to enrollment growth, new programs can be adopted only at the sacrifice of existing programs. Such a constraint may be desirable in many cases, but it will not encourage approval of new programs that are highly experimental.

In the 1960s, when enrollments and budget support from all sources were growing rapidly, the colleges and universities regularly had new funds to invest in new programs—provided, of course, that they had not underestimated enrollment. Now, however, many institutions are no longer experiencing substantial growth, and some have lost enrollment. If their budgets are tied to enrollments,

as the budgets of an increasingly large number of public institutions are, this flexibility has been lost.

The absence of growth need not result in institutional stagnation, however, and the best proof of this is to be found among proprietary schools whose continuing vitality depends upon their ability to adapt quickly to changes in the labor market. A similar flexibility must be, and has been, shown by those private collegiate institutions that are heavily involved in off-campus instruction.

An active effort to attract new students may, in fact, be the strongest stimulus for institutional change. The current interest in nontraditional education and external degrees reflects a desire not only to serve potential students who have previously been ignored but also to gain new enrollment to offset declining growth in traditional programs. And, certainly, the recent decisions of several prestigious men's and women's colleges to become coeducational or to become more closely associated with institutions serving students of the other sex—changes dictated by their need to draw from a larger pool of potential students—demonstrate what can be accomplished when the challenge is clearly understood.

10. Faculty Collective Bargaining

The strong drive toward collective bargaining for college and university faculties will continue for at least a decade and may have important consequences for the collegiate sector.

According to a recent report, in the spring of 1973 more than 300 collegiate institutions were involved in collective bargaining with representatives of their faculties.³⁵ There are now three major organizations seeking to unionize faculties, one of which strongly resisted the concept of faculty unionization until recently. It is thus apparent that the union movement among college and university faculty members is not likely to be a passing phenomenon but a matter

of substantial impact upon the operation and governance of collegiate institutions for many years.

This is not to say that collective bargaining and unionization are being embraced by faculties everywhere. A large segment of the professoriate remains firmly opposed to unionization, and this is especially true of faculty associated with the most prestigious graduate training and research institutions. A majority of those institutions that are now effectively unionized are two-year institutions. Among all faculty members in the collegiate sector, recent surveys have shown, only about half or less believe that unionization should be extended to college and university faculties. Moreover, the advance of unionization has depended to a considerable extent on the existence or passage of state laws authorizing collective bargaining in this sphere.

There is, nevertheless, substantial momentum behind the movement, and it is likely to have important consequences for the management and financing of collegiate institutions. In the case of public institutions, in which more than 90 percent of the bargaining units are now located, it appears probable that, with increasing frequency, faculty members will take their salary disputes directly to state legislatures, bypassing campus and system administrators. This procedure is likely also to characterize the principal decisions regarding working conditions. Collective bargaining units may try to standardize salaries and working conditions for the majority of faculty members, and especially for those at the entry levels. These and other changes may have a significant impact upon the cost of institutions and upon the flexibility with which institutions respond to the new educational needs of individuals and society.

11. Educational Technology

There will be a significant increase in the institutional uses of the technology of communications and data processing.

Although students and faculty alike have been resistant to or apathetic about the introduction of new instructional technology, there are indications that there may soon be a rapid growth in the use of television, computers, and other electronic devices in the instructional process. According to a recent Carnegie Commission study, education generally, and collegiate postsecondary education specifically, "now faces the first great technological revolution in five centuries in the potential impact of the new electronics."³⁶ By the year 2000, says this report, 10 to 20 percent of on-campus instruction and as much as 80 percent of off-campus instruction may be carried on through "informational" technology.

Experience over the past two decades has demonstrated, however, that this technology is not likely to speed up the educational process significantly or yield substantial economies. Experience with limited application of new technologies in postsecondary education reveals, in fact, that it will increase instructional costs, at least in the short run. It may, nevertheless, permit much greater flexibility in determining where and when instruction is available to students of all kinds, offer alternative ways of presenting instruction, and permit students to play a greater part in directing their own learning. In sum, it may provide an extension and enrichment of the learning process.

A massive investment will be required before this new technology is routinely available, however, and such investment may come slowly in the face of a relatively abundant supply of teaching personnel and resistance to substantial increases in public spending for institutional support. Nevertheless, both public and private institutions appear to be adopting the new technology as fast as their budgets will permit, and its effect is already being felt.

12. New High School Curricula

Recent efforts to reform high school curricula, and especially those intended to improve occupational training, may produce further changes in participation rates for post-secondary education and alter the future educational needs of many persons.

In the last few years, there has been a growing movement to reform secondary schools in many states, with increasing emphasis upon effective occupational training. This movement may be given further impetus as a result of the recently published report of the National Commission on the Reform of Secondary Education, which recommends that greater efforts be made to meet the needs of occupationally-oriented high school students.

Several states have already established new occupational programs, or area skill centers, at the secondary level. These centers offer supplemental programs to the regular high school curricula for students who are interested in pursuing such career programs as home economics, printing, drafting, machine trades, automotive trades, office procedures, and vocational nursing. In addition, articulation agreements are being developed in some states between the high schools and their neighboring community colleges to obtain improved counseling and supportive instruction for occupationally-oriented students.

To the extent that these programs are successful in providing high school students with marketable skills, these programs have a significant impact on college-going rates. The college-going rate among students enrolled in these special programs seems to have levelled off or declined in Michigan, where area skill centers are placing 50 to 60 percent of their graduates in job.

13. Institutional Costs and Productivity

Institutions of postsecondary education will be under strong pressure to increase their productivity to match rising costs.

When the price of any good or service increases faster than the general rate of inflation, it is reasonable that those who purchase the good or service demand that there be some improvement in quality to justify the increase in price. Thus, the rising real cost of postsecondary education has led students, taxpayers, and their representatives to ask for some evidence that they are getting their money's worth. When institutional and student costs are added together, "the total outlay," it has been observed, "is so great that nothing short of superb outcomes from the educational process can be justified or tolerated."³⁷

Education is a service industry, however, and the quality of service it provides is very difficult to measure. Moreover, like most service industries, it is a labor intensive industry in that roughly 85 percent of operating costs results from the employment of people (as faculty, administrators, and clerical assistance). Labor saving capital equipment, which accounts for much of the increase in productivity in other industries, has so far played a relatively small role in the education industry.

Many educators argue that there has been an improvement in the quality of instruction over the years. Yet, according to another recent study published by the Carnegie Commission on Higher Education, there is no direct evidence of an increase in the productivity of the collegiate sector of postsecondary education during the past four decades. "Between 1930 and 1967," it is reported, "instructional inputs and credit hours appear to have increased more or less proportionately. If growth in credit hours is a reliable indicator of growth in real instructional output, then there is a strong possibility that there has been no productivity change in the production of higher education over the time period—and this despite the very rapid growth rates in higher education."

If this observation is true—and all the data necessary to prove the argument one way or the other are not yet available—then it is understandable that there should be a strong public demand that postsecondary education begin to give evidence of improved productivity in return for the private and public resources allocated to it. It will be extremely difficult for educators to demonstrate productivity gains with the analytical tools now at hand. Every effort must be made to develop means for measuring the productivity of educational institutions.

14. Federal Support for Postsecondary Education

Federal support for postsecondary education will continue to reflect changing national priorities and to be subject to the changing impact of fiscal and monetary policies.

Federal support for postsecondary education continues to increase; but, as has been quite apparent recently, federal spending for postsecondary education, as for most other purposes, is strongly conditioned by changing national priorities and by the government's fiscal and monetary policies.

The level of federal support for postsecondary education is primarily determined by the ranking it is given by the President and Congress in relation to other major areas of expenditure, including defense, agriculture, welfare, health care, aid to elementary and secondary schools, law enforcement, transportation, and many others. Approximately 3 percent of the federal budget is now devoted to postsecondary education, considerably more than was provided only a decade ago. Whether this percentage will rise further will depend, however, on the character and extent of new demands on the federal budget that are certain to develop in the future and the response to those demands.

In addition, the current effort to combat inflation by maintaining ceilings on the federal budget has meant that there has been only partial financing of the massive increases in student financial aid

authorized by the Education Amendments of 1972 and no financing for new institutional aid. Similarly, the rising interest rates and the introduction of a means test for student borrowers have had a dampening effect on the demand for and availability of student loans.

15. Trends in State Support

Although the states may enjoy a period of relative prosperity in this decade, they are not likely to increase significantly the share of their resources devoted to postsecondary education.

Faced with an unprecedented demand for postsecondary education, beginning in the late 1950s, the states responded with massive increases in spending to provide the necessary faculty, classrooms, and equipment. According to one report, state appropriations for the collegiate sector increased by 295 percent between 1962 and 1971.³⁸ This was accomplished by increasing state tax revenues and by allocating a greater share of those revenues to postsecondary education. Between 1962 and 1971, the share of state general revenues devoted to postsecondary education increased from 11 percent to 15 percent.³⁹ Clearly, support for postsecondary education was given a high priority in nearly every state during this period.

Now the question is: will the tremendous state effort of the 1960s be sustained, or will the states, because of declining growth rates for enrollment and expanding demands for funds in other areas, redirect their resources to other purposes? The answer will depend in part on the

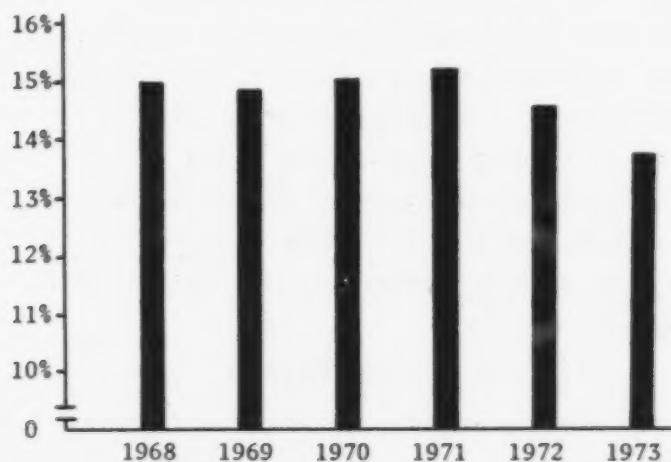
financial condition of the states, for state spending is largely dependent upon the amount of revenue expected to flow into state treasuries. And it will also depend on the attitudes of state officials regarding the need for funds for postsecondary education in relation to other demands upon state funds.

Many of the states suffered severe financial problems in the period 1969-71, largely as a result of the economic recession that cut into expected tax revenues, on the one hand and on the other, increased demands for health and welfare payments. In 1972 and 1973, however, most of these same states began to make dramatic recoveries, not only because of improving economic conditions but also because they had succeeded in holding down expenditures (including expenditures for postsecondary education) and in raising new state revenues.⁴⁰ Over the past two decades, state tax structures have changed considerably, and a large proportion of the states now have tax bases that have relatively high levels of income elasticity—that is, they respond quickly to increases in personal income.⁴¹ In addition, the states have begun to benefit from federal revenue sharing programs.

According to two recent projections of state and local income and expenditures to 1980, the states may be expected to enjoy substantial surpluses in their general funds through the 1970s.⁴² Thus, there is reason to believe that states will be able to maintain and perhaps even increase their level of spending—as a percentage of current revenues—for postsecondary education. It now seems possible, nevertheless, that they will not do so. The total amount of state support will continue to rise, but it may be a constant or declining share of available revenues for the next several years. Several factors—the campus disturbances of the late 1960s, the necessity for careful scrutiny of college and university budgets when money was tight, and the press of other public problems—have operated to give spending for postsecondary education a relatively low level of importance in the minds of many state officials. Many

of the states have been subject to growing pressure for reform in public school finance, local property tax relief, and increased spending for mental health, health insurance, rapid transit, environmental protection, and other competing demands for financing. As a consequence, the annual budget requests submitted by the public collegiate institutions are undergoing increasingly careful scrutiny by state budget officials and legislatures in a continuing effort to reduce "unnecessary" costs at all levels. And, while state appropriations for postsecondary education are increasing, they are not growing in proportion to state revenues. (See Figure C.) It is also apparent that the declining growth in enrollment in the collegiate sector has considerably lessened the pressure on state budgets to continue to provide large annual increases in institutional support.

Figure 1-C: Total State Appropriations for Collegiate Institutions as a Percentage of Total State Revenue



Source: Center for Research and Development in Higher Education, Berkeley, California, unpublished preliminary report of 1973 survey data.

When all these factors are taken into account, it seems likely that in the coming decade postsecondary education will receive no greater share of state and local revenues than it now receives, and perhaps less. It also seems likely that the state and local share of total financing for postsecondary education may stop growing. There is considerable interest at the state level, however, in expanding student financial aid, providing additional assistance to private institutions, and taking over that portion of the cost of financing public two-year colleges that remains a local responsibility. There is also substantial interest in encouraging the development of new methods for providing educational services to older persons and to persons who cannot or do not want to attend college full-time at a particular campus.

These are the principal changes that, based upon current evidence, the Commission believes are likely to occur over the next two decades, with important consequences, direct and indirect, for the structure and financing of postsecondary education. As noted earlier, the extent and even the direction of change is unclear in several cases, but change itself is probable and must be taken into account when planners attempt to estimate the resource requirements of postsecondary education in the future. Insofar as possible, these factors have been taken into consideration in the analysis of alternative financing patterns in Chapter 7 of this report.

Conclusions

1. Postsecondary education in the United States is a large enterprise including more than 2,900 traditional collegiate institutions serving some 9.3 million students and an additional 7,000 noncollegiate technical, vocational, and proprietary institutions serving approximately 1.6 million students. Postsecondary education also includes an estimated 3,500 additional institutions and organizations (serving an unknown number of

students) as well as a great many other noninstitutional learning opportunities (in which as many as 32 million people may participate).

2. Recognizing the broad scope of postsecondary education, the Commission has adopted for the purposes of its study the following definition, encompassing the 2,900 traditional collegiate institutions and 7,000 noncollegiate institutions:

Postsecondary education consists of formal instruction, research, public service, and other learning opportunities offered by educational institutions that primarily serve persons who have completed secondary education or who are beyond the compulsory school attendance age and that are accredited by agencies officially recognized for that purpose by the U.S. Office of Education or are otherwise eligible to participate in federal programs.

3. Total enrollment of students from the traditional college-age group (18-21) in the collegiate sector will continue to increase during the 1970s but at a rate reduced from that of the 1960s. During the 1980s, however, total enrollment of such students is likely to decline, although some sectors may experience enrollment growth. Data necessary to project enrollment from other age groups and in the noncollegiate sector are not available.
4. Ethnic and racial minorities, persons from low-income families, women, and individuals of all ages seeking continuing professional development or retraining will make up an increasing proportion of total enrollment in postsecondary education.
5. The new 18-year old age of majority and emerging changes in high school programs are likely to affect postsecondary education in major ways that are not yet easily determined.

6. Institutions of postsecondary education will be under strong pressure to increase their productivity to match rising costs.
7. Other important changes are taking place in the society and among the institutions of postsecondary education that will have an important bearing on the level and structure of financial support necessary to serve the interests of society and individuals. These changes are described in this chapter.

Recommendation

The Commission recommends that data should be collected on those sectors of postsecondary education other than those identified herein as the collegiate and noncollegiate sectors.

CHAPTER 2

OBJECTIVES FOR POSTSECONDARY EDUCATION

OBJECTIVES FOR POSTSECONDARY EDUCATION

The central task of this Commission has been to study and recommend improvements in the financing of postsecondary education. To do so, the Commission might have undertaken a detailed review and evaluation of specific financing programs—guaranteed loans, for example, or Basic Educational Opportunity Grants, or state budgets for public colleges and universities—in an attempt to discover how well each of these programs achieves the goals set out for it and ways in which each program might be improved. Such an approach would have contributed little, however, to the development of the systematic structure for policy analysis requested by Congress. Nor would it have helped to resolve the most pressing issues left undecided following enactment of the Education Amendments of 1972.

Consequently, the Commission chose at the outset of the study to devote considerable effort to developing a set of broadly-stated objectives for postsecondary education that would serve as a foundation for subsequent analytical work. These objectives do not deal with the ultimate purposes of education—knowledge, self-fulfillment, and socialization, for example—but with how postsecondary education should be structured, in the broadest sense, to serve those purposes. These objectives are intended to be more than just bench marks for the evaluation of financing policies and programs, but they were drawn up with the thought that they should be put to that practical use as well. Thus, these objectives are used in later chapters of this

report to measure the effectiveness of current financing patterns and as the starting point in developing a framework for analyzing alternative financing patterns.

The objectives chosen by the Commission deal with eight subjects:

1. Student access;
2. Student choice;
3. Student opportunity;
4. Educational diversity and flexibility;
5. Institutional excellence;
6. Institutional independence;
7. Institutional accountability; and
8. Adequate financial support.

The Commission adopted objectives dealing with these subjects and specific phrasing of the objectives only after extensive discussion and debate based on careful consideration of the viewpoints expressed by students, educators, public officials, and others, as well as similar statements of objectives presented in recent state and national studies by other organizations. These objectives were determined independently by the Commission, but, in its judgment, they provide a fundamental statement of what might be termed the "national interest" with regard to financing postsecondary education.

In listing these objectives and in attempting to develop a systematic framework for policy analysis, however, the Commission is not advocating the development of a national system of postsecondary education. On the contrary, the Commission accepts the fact that the organization and financing of postsecondary education are pluralistic and diverse. Moreover, it accepts the fact that basic objectives may often conflict and that effort must be directed toward achieving an optimum balance among the objectives rather than toward full achievement of each objective.

1. Student Access

Each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability, and motivation.

All who are capable of benefiting should be assured access to postsecondary education in some form. There must be no arbitrary or artificial barriers related to sex, age, race, income, residence, ethnic group, religious or political belief, or prior educational achievement. And access must mean more than just admission to an institution. It must mean assurance that participation is limited only by one's ability to meet reasonable standards applicable to all participants and by one's willingness to apply oneself to the required work. It must mean full participation in high quality programs that are meaningful according to one's needs, capability, and motivation.

Special attention must be given to assure access to those who previously have been denied access to postsecondary education. Moreover, it must be recognized that people's needs and motivations change over time so that the manner in which access is assured may also have to change.

Access is also dependent upon information; that is, potential students must be informed about the programs offered by individual institutions: their strengths and weaknesses, expectations about student achievement, and the availability of financial and other assistance.

2. Student Choice

Each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her for admission.

Choice is closely related to access. Each person should be assured a real choice among the institutions that have accepted him or her for admission. To deny such choice would be to restrict access.

To the extent that choice depends upon financial aid, reasonable student financial assistance must be available from public and private sources in some combination of grants, loans, employment, and personal savings and parental contributions.

3. Student Opportunity

Postsecondary education should make available academic assistance and counseling that will enable each individual, according to his or her needs, capability, and motivation, to achieve his or her educational objectives.

Once enrolled, students who apply themselves should be assured full opportunity to achieve their educational objectives. Institutions of postsecondary education are responsible for meeting the special needs of individual students for counseling, academic assistance, and other supportive services. Particular attention should be given to the needs of students who have had only limited postsecondary educational opportunities and who may have needs that differ significantly from those of students whom the institutions are more accustomed to serving. Only where there is real opportunity for achievement will the objectives of access and choice also be fulfilled.

4. Educational Diversity

Postsecondary education should offer programs of formal instruction and other learning opportunities and engage in research and public service of sufficient diversity to be responsive to the changing needs of individuals and society.

There must be great diversity in our institutions of postsecondary education if all reasonable needs of students and society are to be served. This diversity should be present in programs of research and public service as well as in programs of instruction, and in a variety of institutional settings. Furthermore, institutions of postsecondary

education must be able to respond to the changing needs of students and society for learning opportunities and for the discovery and dissemination of new knowledge. Internal and external pressures to restrict institutional diversity and flexibility unnecessarily should be opposed.

Diversity, from the student's point of view, means that postsecondary institutions offer a range of opportunity for individual development and training for future employment. Diversity also implies renewal, reform, and responsiveness to students' needs for both formal and informal learning opportunities.

5. Institutional Excellence

Postsecondary education should strive for excellence in all instruction and other learning opportunities, and in research and public service.

Excellence must be the primary objective of postsecondary education in all of its forms, with excellence in the service to students its overriding concern. Excellence is not, however, to be judged by a single standard. It is as important to provide excellent training for laboratory technicians and auto mechanics as it is for engineers and chemists. Excellence is a responsibility of all institutions, public and private, the least as well as the most selective.

6. Institutional Independence

Institutions of postsecondary education should have sufficient freedom and flexibility to maintain institutional and professional integrity and to meet creatively and responsively their educational goals.

Institutions of postsecondary education must be assured the independence essential to the exercise of professional judgment so that they may carry out their responsibilities most effectively and be

responsive to the changing needs of students and society. The dividing line between the proper exercise of public authority or private responsibility, on the one hand, and undue intervention, on the other, is often difficult to establish. Yet public and private governing bodies and other agencies must be aware that there is such a line. Crossing it may affect the quality of services provided by the institutions.

7. Institutional Accountability

Institutions of postsecondary education should use financial and other resources efficiently and effectively and employ procedures that enable those who provide the resources to determine whether those resources are being used to achieve desired outcomes.

With independence goes accountability. Independence and accountability must be balanced so that the interests of students and the general public do not become subordinated to those of the institutions. This is not to say that postsecondary institutions have been irresponsible in this sense in the past, but that they must not in the future lose sight of the interests of those they serve.

Institutions must be financially accountable not only in the traditional fiduciary sense but also in terms of the application of available resources to the achievement of identifiable programs and institutional goals. Those who manage postsecondary educational institutions should be able to demonstrate efficiency and effectiveness in pursuing those goals.

8. Adequate Financial Support

Adequate financial resources should be provided for the accomplishment of these objectives. This is a responsibility that should be shared by public and private sources, including

federal, state, and local government, students and their families, and other concerned organizations and individuals.

Accomplishing several of the forgoing objectives is directly dependent on the provision of adequate financing, and it will be possible to accomplish all of the objectives only with an increase in the present level of financial support.

Financing postsecondary education is not the responsibility of taxpayers, solely, or of parents and students. It is a shared responsibility, and it is the sharing of this responsibility among governments, students and their parents, and private individuals and organizations that has given this nation's institutions of postsecondary education much of the strength and continuity they now enjoy. Moreover, there is no single combination of financing responsibilities that can be applied to all institutions.

State and local governments should provide the basic institutional capability to offer a variety of postsecondary educational programs and services according to the needs of their citizens. The federal government should accept major responsibility for financing postsecondary educational programs that serve goals and priorities that are primarily national. Students and their families should share in meeting the basic costs of their education to the extent of their ability to do so and in exercise of their freedom to choose among programs and institutions. Alumni, foundations, corporations, and other private organizations and individuals should provide the supplementary support that traditionally has been a principal ingredient in assuring high quality among both private and public institutions.

In the real world of limited resources, however, hard choices must be made about the deployment of available financial resources for maximum effectiveness. It is with this reality firmly in mind

that several alternative financing policies are considered and evaluated in a later chapter of this report.

Criteria for Measuring Achievement

Deciding upon objectives, as important and difficult as it may be, is only a start. The next step is to identify specific criteria that may be used as standards of achievement—that is, to determine how well objectives are being met under current financing patterns and the extent to which alternative financing patterns may result in greater achievement. Such criteria may be expressed either in quantitative or qualitative terms, although it is important to establish quantitative criteria wherever doing so will contribute to greater precision in measuring the degree of achievement of each objective.

Most of the objectives identified by the Commission are very general in character and therefore possessed of more than one facet. Diversity, for example, has several meanings that are closely related but subject to different measures of accomplishment. Moreover, in no case is there a single measure or criterion that is entirely satisfactory. It is essential, therefore, to develop a cluster of criteria for each objective that will not only reflect the different facets of the objective but also help to minimize the danger of using criteria that, standing alone, may be misleading.

The following criteria are proposed as initial measures of the achievement of the objectives outlined above:

1. Student Access

The extent to which the student population and the college-age population are similar with respect to:

- a. Income level
- b. Racial composition
- c. Ethnic group
- d. Sex
- e. Family residence

2. Student Choice

- a. The extent to which persons from all income groups are enrolled in institutions with high, medium, and low student charges
- b. The distribution of low-income students among the various institutional types

3. Student Opportunity

- a. The degree to which aptitude and educational achievement are correlated
- b. The extent to which students complete the programs in which they enroll*

4. Institutional Diversity

- a. The number of institutions of different types
- b. The variety of institutional purposes
- c. The variety of curricular offerings available to students
- d. The variety of institutional size and administration
- e. The variety of teaching methods

5. Institutional Excellence

- a. Academic quality according to surveys of faculty opinion
- b. Success of graduates in obtaining employment in the fields in which they were trained

6. Institutional Independence

- a. Diversity of financial support
- b. Institutional freedom to allocate income
- c. Freedom from financial reprisal

*The Commission recognizes that for some students, program completion may not be as important, for example, as receiving sufficient training to obtain employment; however, for many students, program completion remains an important measure of opportunity.

7. Institutional Accountability

- a. Compliance with public regulations regarding the handling of money, safety requirements, civil rights, etc.
- b. Voluntary reporting of financial information
- c. Responsiveness to the demands of those who provide financial support
- d. The degree to which institutional goals are accomplished

8. Adequate Financial Support

- a. Institutional strength
- b. Shared responsibility
- c. Accomplishment of the previous seven objectives

Unquestionably, additional criteria should be developed to guide policy makers in designing financing policies that best accomplish their objectives. The Commission makes no claim that these criteria are exhaustive or above question. On the contrary, it is evident that much might be gained by a concerted effort to develop additional criteria to supplement or replace those that are listed. In the meantime, however, the Commission believes that criteria such as these should be used by policy makers in considering alternative financing proposals for postsecondary education. Examples of how some of these criteria might be used are presented in Chapters 4 and 7 of this report.

Conclusions

- 1. A set of objectives for postsecondary education in the United States is necessary for evaluating alternative proposals for financing postsecondary education.
- 2. A set of criteria for each objective is needed to measure the degree of achievement of the objective.

Recommendations

1. The Commission recommends the adoption of the following eight objectives:
 - a. Each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability, and motivation.
 - b. Each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her.
 - c. Postsecondary education should make available academic assistance and counseling that will enable each individual, according to his or her needs, capability, and motivation, to achieve his or her educational objectives.
 - d. Postsecondary education should offer programs of formal instruction and other learning opportunities and engage in research and public service of sufficient diversity to be responsive to the changing needs of individuals and society.
 - e. Postsecondary education should strive for excellence in all instruction, research, public service, and other learning opportunities.
 - f. Institutions of postsecondary education should have sufficient freedom and flexibility to maintain institutional and professional integrity and to meet, creatively and responsibly, their educational goals.
 - g. Institutions of postsecondary education should use financial and other resources both efficiently and effectively and employ procedures sufficient to enable those who provide the resources to determine whether those resources are achieving desired outcomes.
 - h. Adequate financial resources should be made available to permit the accomplishment of the forgoing objectives. This is a responsibility that should be shared by a combination

of public and private sources, including federal, state, and local government, and by students, parents, and other concerned individuals and organizations.

2. The criteria used by the Commission in measuring the achievement of these objectives have been helpful in the analysis of alternative financing plans, but additional effort should be directed toward improving these criteria.

CHAPTER 3

CURRENT FINANCING PATTERNS

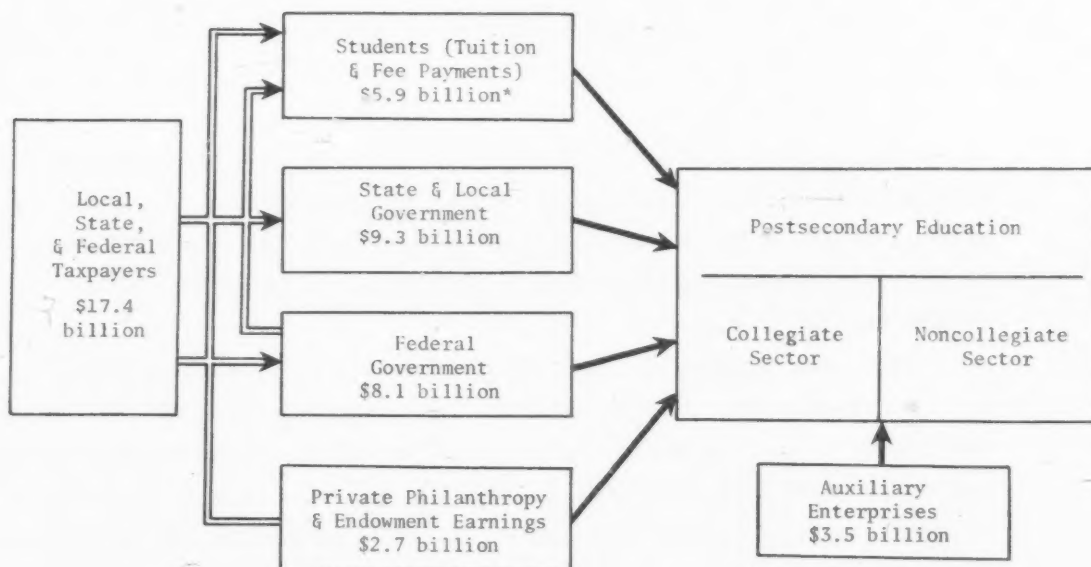
CURRENT FINANCING PATTERNS

In order to evaluate alternative plans for financing postsecondary educational institutions, it is necessary to have some frame of reference from which to assess data—actual and projected. It is the purpose of this chapter to establish this frame of reference by identifying and describing the recent (1972) level of financing, by source and recipients.

After two decades of unprecedented growth, postsecondary education in the United States has become, in round numbers, a \$30 billion enterprise. This is the estimated total amount of income to collegiate and noncollegiate institutions in 1971-72, the last year for which reasonably complete data are available. Of this amount, an estimated \$5.9 billion was provided by students (after deducting student aid) in payment of tuition and other educational fees, \$9.3 billion was provided by state and local government, \$8.1 billion was provided by the federal government, \$2.7 billion came from gifts and endowment income, and \$3.5 billion came from auxiliary enterprises and other institutional earnings.

As these figures clearly demonstrate, the financing of postsecondary education in the United States is a responsibility shared by students and their families, government at all levels, philanthropic organizations and individuals, and the institutions themselves. This sharing is diagrammed in Figure A, in which the five major financing streams are illustrated. Although tuition and fees generate the largest stream of income, an estimated \$10.3 billion in total, only somewhat more than half of this, \$5.9 billion, comes from students and their parents. The balance, \$4.4 billion, comes from financial aid to students provided by local, state, and federal government and private sources.

Figure 3-A: Major Sources of Financial Support for Postsecondary Education, 1971-72



*Net of student aid.

Total support for postsecondary education in 1971-72 consisted of an estimated \$25.1 billion in institutional support and \$4.4 billion in student financial aid (see Table 1). State and local governments were the principal source of institutional support, while the federal government was the principal source of student financial aid used by students to pay tuition and other fees. An additional \$1.1 billion in federal student aid, which is excluded from these figures, goes to help students pay for their books and supplies and normal living costs.*

*The estimated \$1.1 billion in federal student aid that goes to pay for books and supplies, housing, and meals includes Veterans' and Social Security benefits.

Table 3-1: Major Sources of Income for Postsecondary Education,
1971-72

(In billions)

Sources of Income	Institu- tional Support	Aid to Students	Total Support	Percent of Total
Student payments for tuition and other fees	\$5.9*	--	\$5.9	20.0%
State and local government	9.0	0.3	9.3	31.6
Federal government	4.2	3.9	8.1	27.4
Private philanthropy and endowment income	2.5	0.2	2.7	9.1
Auxiliary enterprises and other activities	<u>3.5</u>	<u>--</u>	<u>3.5</u>	<u>11.9</u>
Total	\$25.1	\$4.4	\$29.5	100.0%

*Net of aid received by students from public and private sources
and paid to institutions for tuition and fees.

The financial support provided by each of the five major sources comes in a number of forms: budget appropriations, project grants, subsidized loans, restricted gifts, and tax benefits, to name a few. In order to describe and analyze each financing source and all sources combined, these financing forms or mechanisms are classified according to the following basic categories:

I. Institutional Support

- A. General institutional support
- B. Categorical aid (current)
- C. Construction aid
- D. Tax benefits
- E. Other institutional aid

II. Student Financial Aid

- A. Grants and scholarships

B. Loans (subsidized)

C. Tax benefits

General institutional support includes monies from all sources that are unrestricted in purpose and are, therefore, available to cover the full range of institutional costs. Categorical aid (current) is support for current operations that is restricted to a specific purpose, project, or recipient. Construction aid is that aid provided for major institutional capital outlay, property acquisition, and related costs. Tax benefits include benefits to institutions and benefits to individuals and organizations that provide monies to institutions. Student financial aid includes Veterans' and Social Security benefits and all grants, scholarships, and fellowships, but only the subsidized portion of student loans, because the unsubsidized portion is repayable by students out of their personal resources. Subsidized employment (such as work-study) is included under institutional support, inasmuch as students are paid for their services from these funds just as other employees are paid from institutional support.

In the following pages, each of the five major income streams is described in terms of these categories.

Income from Tuition and Related Fees

Net Student Payments for Educational Services

Payments by students for postsecondary educational services amounted to an estimated \$5.9 billion in 1971-72, or 20 percent of estimated total income from all sources. This figure represents payments of \$10.3 billion for tuition and other related fees, less an estimated \$4.4 billion in direct financial aid to students from local, state, federal, and private sources; and \$5.9 billion represents the net cost to students.

In addition to this net cost, students paid out an estimated \$7 billion for subsistence and education-related expenses, including

room, board, necessary transportation, books and supplies, and miscellaneous other items.¹ Thus, the total "out-of-pocket" cost to students, after deducting aid in the form of scholarships and grants and other types of subsidies, was \$12.9 billion.* To this figure, most economists would add a "net opportunity cost"; that is, income forgone by students who would otherwise be employed (or employed full-time), less the additional subsistence costs associated with such employment. Unfortunately, there is no generally accepted method for estimating this cost, and, therefore, the Commission chose to exclude it from its analyses. It is nevertheless a very important cost from a student's point of view and must be treated as a consideration of certain, if unquantifiable, impact on the educational decisions of students and potential students.² A net opportunity cost may be especially important as a barrier to those from low-income families.

During the 1960s, income to collegiate institutions from student tuition and other fees rose slightly in relation to reported income from other sources. This increase was shared by public and private institutions of all types (see Table 2) but was particularly significant for four-year private colleges. Between 1961-62 and 1971-72, income from this source rose from 28.6 percent to 34.4 percent of total income for private institutions and from 8.6 percent to 14.8 percent of total income for public institutions. Thus, although many state institutions raised tuition rates substantially in the latter half of the decade, the gap between public and private tuition rates continued to grow during this period. The latest figures compiled by the U.S. Office of Education and the College Scholarship Service indicate that the average tuition for private four-year institutions has

*Approximately \$2.5 billion of the \$7 billion in subsistence and education-related expenses is accounted for as income to auxiliary enterprises (residence halls, cafeterias, and book stores), and some portion of it was paid out of the estimated \$1.1 billion in federal grants to students that went to subsistence costs. If the remaining subsistence costs to students are added to the total income to institutions, the total expenditure for postsecondary education rises to \$34.0 billion.

Table 3-2: Tuition and Other Student Fees as a Percentage of Reported Fund Income, Collegiate Sector, 1961-62, 1965-66, 1971-72

Institutional Type	1961-62	1965-66	1971-72
<u>Private Institutions</u>			
Major universities.....	24.7%	25.4%	21.7%
Other four-year institutions..	31.3	34.3	51.3
Two-year institutions.....	46.5	46.4	50.8
All private institutions.....	28.6	30.7	34.4
<u>Public Institutions</u>			
Major universities.....	8.0%	9.1%	13.7%
Other four-year institutions..	10.1	11.4	16.8
Two-year institutions.....	9.2	10.4	14.3
All public institutions.....	8.6	9.8	14.8
<u>All Institutions.....</u>	17.2%	18.2%	21.9%

Source: U.S. Office of Education, *Trends in Postsecondary Education* (October 1970), pp. 120 and 129; HEGIS, *Financial Statistics of Institutions of Higher Education* (1971-72).

risen to four times that of the average for public four-year institutions.

It must be remembered, however, that these figures refer to gross tuition charges before deduction of student aid administered by the institutions. The tuition differential that applies to students who are not eligible for financial aid is substantially higher than that

for low-income students who are. There is little or no net tuition differential between public and private institutions for students in the lowest income quartile (see Chapter 5).

According to the data obtained from the Commission's survey of career schools, noncollegiate institutions derive approximately 45 percent of their current income from tuition payments and another 11 percent from auxiliary enterprise income, which is largely from services to students. Correspondence schools rely most heavily on student charges, obtaining 96 percent of their current income from this source. Public technical and trade schools, on the other hand, rely heavily on governmental support and receive only about 13 percent of current revenue from student charges. (See Table 3.)

Costs of Attending Institutions of Postsecondary Education

The average cost of attending a public four-year collegiate institution as a full-time undergraduate in 1971-72 was \$1,875 for students residing on campus and \$1,659 for students commuting from off-campus residences. Students attending private four-year colleges and universities paid an average of \$3,171 if they lived on campus and \$2,599 if they were commuters. Students who attended public two-year institutions as commuters paid \$1,526, or \$133 less than those who attended public four-year colleges and universities (see Table 4). These figures are derived from a survey of more than 2,000 collegiate institutions by the College Scholarship Service (CSS) and represent the only national data currently available. It should be noted, however, that they are institutional estimates rather than student estimates and that, as averages, they obscure substantial differences among institutions, individual students, and regions of the country. (For example, such averages obscure the fact that community college students pay no tuition in California.) A CSS survey of college sophomores in 1969-70 revealed significant differences in costs between male and female students, blacks and whites, and commuters and residents—

Table 3-3: Average Tuition Charges* of Noncollegiate Institutions, 1971-72

Institutional Type	Amount
Public:	
Trade and Technical	\$104
Others	133
Proprietary:	
Trade and Technical	\$1,620
Others	1,017
Nonprofit:	
Trade and Technical	\$961
Others	396
Correspondence Schools	\$416*

Source: National Commission on the Financing of Postsecondary Education (NCFPE) Survey of Noncollegiate Institutions.

Note: Sampling was based on three major institutional categories: (1) trade and technical; (2) others; and (3) correspondence schools.

Trade and Technical institutions include, for example, auto mechanics, baking, barbering, bartending, carpetlaying, drafting, and other technical programs. Others include vocational programs, business schools, cosmetology programs, flight training, hospital and para-medical programs, and commercial training programs.

Three institutional controls—public, proprietary, and nonprofit—may be explained as follows:

Public: Institutions controlled by federal, state, or local governments.

Proprietary: Institutions operated as a private, profit-making school.

Nonprofit: Institutions operated as an independent non-profit-making school.

*Estimated tuition for nine-month academic year average.

Table 3-4: Average Undergraduate Student Costs, Collegiate Sector,
1970-71 through 1972-73

Institutional Type	Resident Students			Commuter Students		
	1970-71	1971-72	1972-73	1970-71	1971-72	1972-73
<u>Public Institutions</u>						
Two-Year						
Tuition and Fees.....				\$168	\$185	\$200
Room and Board.....				544	566	615
Other Expenses.....				718	775	820
Total.....				\$1430	\$1526	\$1635
			(Insufficient data)			
Four-Year						
Tuition and Fees.....	\$395	\$439	\$465	\$395	\$439	\$465
Room and Board.....	847	890	945	458	494	545
Other Expenses.....	541	546	575	678	726	750
Total.....	\$1783	\$1875	\$1985	\$1531	\$1659	\$1760
<u>Private Institutions</u>						
Two-Year						
Tuition and Fees.....	\$1144	\$1192	\$1210	\$1144	\$1192	\$1210
Room and Board.....	849	877	910	341	382	395
Other Expenses.....	387	415	420	349	419	485
Total.....	\$2380	\$2484	\$2540	\$1834	\$1993	\$2090
Four-Year						
Tuition and Fees.....	\$1517	\$1652	\$1725	\$1517	\$1652	\$1725
Room and Board.....	952	1007	1035	398	469	525
Other Expenses.....	505	512	520	467	478	495
Total.....	\$2974	\$3171	\$3280	\$2382	\$2599	\$2745

Source: College Scholarship Service, Student Expenses at Postsecondary
Institutions, 1973-74.

1

differences that do not show up in institutional reports.³ According to this study, male students spend \$150 to \$200 more than female students, with the additional amount spread over nearly every category of expense. Similarly, white students spend an average of \$500 to \$600 more than black students, largely because whites enroll at higher cost institutions and pay more for room and board, transportation, and other items. According to this survey, the difference in costs for residents and commuters runs from \$700 to \$1,000, but this reflects primarily the fact that students living at home did not report room and board costs absorbed by their families.

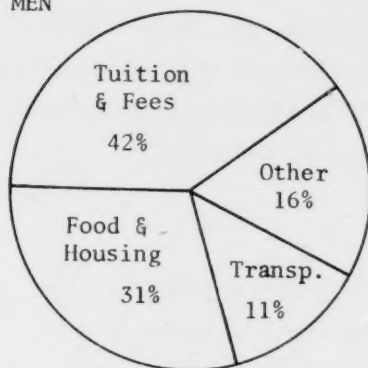
According to a study of student costs conducted in 1969-70 for the College Scholarship Service, the total cost to the average unmarried undergraduate was divided as follows: 43 percent for tuition and other fees; 31 percent for housing; 9 percent for transportation; and 17 percent for all other expenses.⁴ These averages obscure some significant differences in the distribution of costs for individual students (see Figure B).

Without question, the cost of attending a collegiate institution of any kind has gone up rapidly over the past decade, increasing more than per capita income and, therefore, becoming an increasing burden to those who must pay the cost.⁵ Between 1960 and 1970, per capita income rose by an average annual rate of 5.8 percent while average tuition and fees rose by an average of 7 percent each year. In the two-year period of 1970-71 through 1972-73, average expenses for commuting students increased by about 7 percent per year while average expenses for resident students increased from 2 to 6 percent per year. For commuters, the principal increase was for board and room. For resident students, the sharpest increases were for tuition and fees.

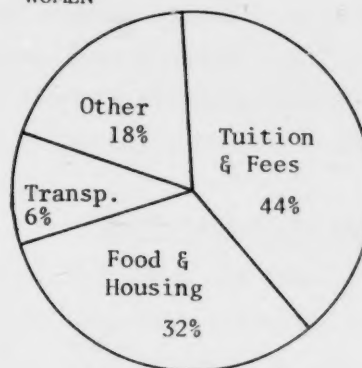
Especially notable has been the increase in tuition charged out-of-state students by public institutions. Several states now charge nonresident students a level of tuition that is approximately

Figure 3-B.: Distribution of Average Student Costs,
by Sex, Race, and Residence

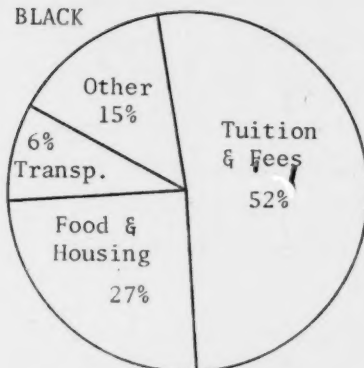
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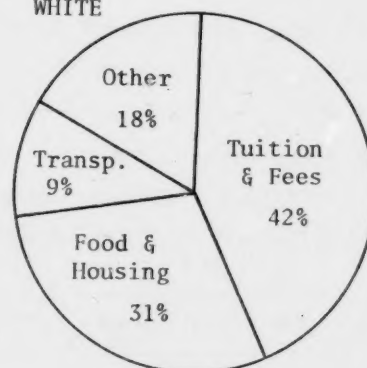
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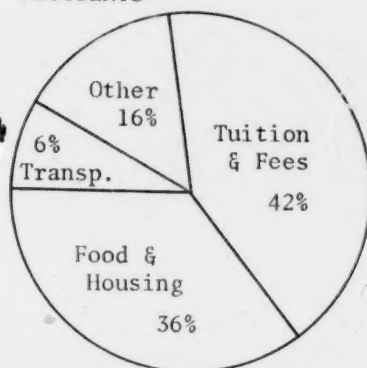
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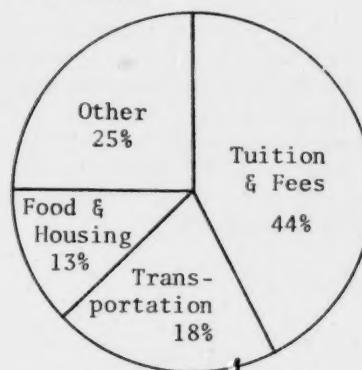
WHITE



RESIDENTS



COMMUTERS



Source: College Scholarship Service, *A National Survey of the Educational Interests, Aspirations, and Finances of College Sophomores in 1969-70.*

equal to the institution's estimated cost per student for "education and general" expenses. The apparent purpose of such high rates is not only to increase revenue but also to discourage large numbers of out-of-state students from enrolling.* At last count, approximately 334,000 undergraduate students and 110,000 graduate and professional students enrolled in an out-of-state public institution.⁶

Sources of Student Funds

To meet the costs of continuing their education beyond high school, students draw upon their own resources (or those of their families, spouses, or other relatives) and upon subsidies from government and private sources. As noted earlier, of the estimated \$10.3 billion paid to postsecondary institutions for tuition and other related fees, an estimated \$5.9 billion is paid out of student resources, and \$4.4 billion is paid out of financial aid provided by local, state, and federal government and various private sources.**

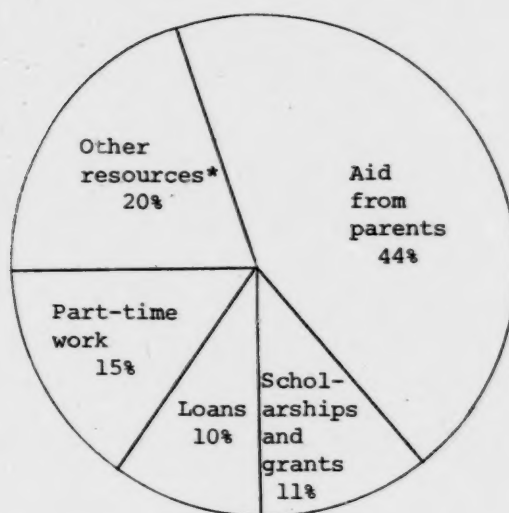
A study sponsored by the College Entrance Examination Board indicates that for college sophomores, student aid in the form of scholarships and grants (excluding Social Security and Veterans'

*At the same time, however, several states are attempting to mitigate the effect of high nonresident tuition through bilateral and multilateral exchange agreements.

**This is not the total amount of public money spent on students, however. Students receive public funds not only directly through financial aid and tuition but also indirectly through the low tuition made possible at public institutions by substantial public support received by public institutions. Public and private support in the form of tuition waivers and reduced tuition have already been deducted from student charges, however, and so need not be deducted again from student payments for tuition and fees in order to arrive at the net cost that students must pay from their own (or their family's resources).

benefits) provides only 10 percent of total student support from all sources for subsistence costs and tuition and fee payments⁷ (see Figure C). This same study indicates that the level of support from parents is 38 percent for male students and 21 percent for black students, while "term-time" employment accounts for 18 percent of support for all male students, 15 percent of support for all black students, and 37 percent of support for all students enrolled in public two-year colleges (see Table 5).

Figure 3-C.: Source of Student Support for College Sophomores, 1969-70



Source: E. W. Haven and D. H. Horch, "How College Students Finance Their Education" (College Entrance Examination Board, 1971).

*Includes Veterans' and Social Security benefits.

Table 3-5: Percentages of Income Received from Various Sources, by Students in Selected Subgroups, 1969-70

Resource	Sex		Race		Residence		Institutional Type			Total
	Men	Women	Black	White	Resi- dents	Com- muters	Public 4-year	Private 2-year	Other Types	
Aid from parents.....	38%	51%	21%	45%	49%	30%	44%	50%	29%	44%
Educational Opportunity Grants..	2	2	11	2	2	2	2	2	2	2
State scholarship & grants from colleges.....	4	4	15	4	5	2	3	7	1	4
State scholarship & grants.....	3	3	1	3	3	3	3	4	2	3
Private scholarship & grants....	1	1	2	1	1	1	1	2	1	1
National Defense Student Loans..	3	3	9	2	3	1	3	3	1	3
College loans.....	*	*	1	*	*	*	*	*	*	*
Guaranteed loans.....	3	4	6	3	4	3	4	4	2	3
Nonguaranteed loans.....	*	1	1	*	1	*	*	1	*	*
Other loans.....	3	3	4	3	3	4	3	3	5	3
Term-time jobs awarded as part of aid package.....	5	4	10	4	4	6	4	3	8	4
Other term-time jobs.....	13	8	5	11	5	27	11	4	29	11
Money drawn from assets.....	17	12	9	15	15	13	18	12	14	15
Social Security & Veterans' Benefits.....	2	2	3	2	2	3	2	2	3	2
Income tax refunds.....	3	2	2	3	2	4	3	2	4	3
Other income.....	1	*	*	1	1	1	1	1	*	1
Total.....	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: E.W. Haven and D. H. Horch, "How College Students Finance Their Education" (College Entrance Examination Board, 1971), p. 10.

*Indicates percentages of .5 or less.

**Due to rounding, totals may not be exactly 100 percent.

State and Local Financing for Postsecondary Education

Powers and Responsibilities of State and Local Governments

In the United States, primary responsibility for the support of education at all levels rests with the states and their various political subdivisions. Traditionally, the states have delegated responsibility for operation of the elementary and secondary schools to local government but have retained full authority for the development of postsecondary education, except in the cases of community colleges and vocational schools that may be operated by either state or local governments, or both.

To carry out their responsibilities with respect to postsecondary education, the states are empowered to grant charters and other privileges of incorporation to educational institutions, provide for the establishment and maintenance of public institutions of higher education, tax or exempt from taxes the property and income of educational institutions, and protect the public's interest in the operation of both public and private educational institutions and agencies. In addition, each state has specific powers and duties regarding the establishment, governance, and support of postsecondary education that are listed explicitly and implicitly in its constitution. The powers and duties of the various political subdivisions of each state—cities, counties, townships, special districts, and so on—derive from those of the states and are ordinarily defined by statute.

Although the basic powers and responsibilities of each of the states are similar, the manner in which they have been carried out varies considerably from state to state and region to region. A number of states have invested vast sums from tax revenues to build extensive networks of public institutions. Some states with a stronger tradition of private postsecondary education have made

much smaller investments in public facilities but have sought to aid in the continuing development of private institutions. Other states have sought to encourage the development of a "balanced" system of public and private institutions. As a consequence, in many respects there is not a single system of postsecondary education in this country; there are fifty systems.

Objectives of State Support

In carrying out their responsibilities for the support of postsecondary education, however, the fifty states have shared a number of basic objectives. All states seek, for example:

- ▶ To provide maximum postsecondary educational opportunities for their citizens according to the financial resources available to states and the attitudes of their citizens regarding government's responsibility for providing such opportunities.
- ▶ To provide training in professional and technical occupations believed to be important to the economic development of each state and the welfare of its citizens.
- ▶ To encourage research in areas of strong public interest (for example, medicine, agriculture, and engineering).
- ▶ To encourage young men and women of exceptional ability to obtain advanced knowledge and skills in the arts, humanities, social sciences, and natural sciences.

Originally, the states attempted to achieve these objectives by aiding in the establishment of private colleges and universities and by supporting them with public funds, a practice that continued well into the nineteenth century. In the early 1800s, however, the states began to build public universities and "normal" schools (teachers colleges). This action was given considerable impetus, particularly in the midwestern and western states, with the passage of the Morrill

Act in 1862. Eventually, as the public institutions began to grow and gain in reputation as centers for instruction and research, the states, with one or two exceptions, discontinued direct public aid to private institutions and concentrated their interest and resources on the public institutions. By 1900, all but one of the states had established at least one public institution of higher education, and 38 percent of all college and university students were enrolled in public institutions. By 1920, over half of all college and university students were enrolled in public institutions.⁸ It was not until the 1950s, just before the most recent surge of building public colleges and universities, that the states began to turn their attention again to the private institutions and to provide them with substantial amounts of public aid, first through state scholarship programs and then, more recently, through direct grants and contracts.

As subordinate units of state governments, local governments first served to adapt state educational objectives to local needs and ambitions by setting up public junior colleges and establishing and operating four-year municipal colleges and universities such as those in Akron, Louisville, Cincinnati, and New York City. More recently, the rapid expansion of two-year colleges in a number of states has resulted in a corresponding increase in local financing for postsecondary education and in local responsibility for administering these institutions. Between 1962 and 1972, the number of special districts that operate two-year colleges rose by 119 to a total of 367. Twenty-two of these districts operated elementary and secondary schools as well, but 345 operated two-year colleges only. A number of counties, municipalities, and special districts supported more than one college so that, in 1972, a total of 557 separate two-year institutions were operated by the 487 local units (see Table 6).

In 1971-72, there were 570 two-year colleges in thirty-two states and the District of Columbia supported by a combination of state and

Table 3-6: Number of Local Governments Operating Postsecondary Educational Institutions, 1962, 1967, 1972

Local Government	1962	1967	1972
Counties.....	41	78	112
Municipalities.....	19	13	8
Special districts..	<u>248</u>	<u>316</u>	<u>367</u>
Total.....	308	407	487

Source: U.S. Bureau of the Census, *Public School Finances*, for years 1962-72.

local financing. There were an additional 226 two-year colleges in nineteen states financed by state governments alone. (In five of these states, there were some colleges with mixed support and some with state support only.) In general, however, the local responsibility for operating and financing two-year colleges appears to be declining as a result of increasing opposition to heavy reliance on local property taxes to support these institutions and growing state interest in improving statewide coordination and planning for all postsecondary institutions.*

Forms and Methods of State and Local Support

State and local governments provide support for postsecondary education in several ways: direct and indirect support for public institutions of higher education, direct and indirect aid to private colleges and universities, financial aid to students, and support

*See Appendix A for the distribution of current income for public two-year colleges by state.

for various other public agencies and programs. By far the greatest amount of state and local financing is provided as direct and indirect support for public institutions.

1. Direct and Indirect Institutional Support

Of the 1,193 public collegiate institutions in this country in 1972-73, state governments supported and operated 849, 335 were under the jurisdiction of and supported by local governments, and 9 were supported by the federal government.* Those institutions that are operated by the states receive financial support through direct annual appropriations for current operations and capital outlay, special grants (including grants from other state agencies), student aid, authority to issue bonds, and exemption from certain state and local taxes. In 1971-72, measurable state support for public institutions amounted to \$7.7 billion. Those institutions that are operated by local governments are supported in much the same way, although a large proportion of their local support comes directly from local tax revenues collected for that purpose. In 1971-72, measurable support from local governments for local public institutions amounted to \$1.1 billion. In addition, of course, those institutions received substantial financial support from their state governments.

The history of state and local support for private colleges and universities in the United States goes back to the colonial period when Massachusetts provided public financing for the support of Harvard College when it opened in 1636. Harvard continued to receive public funds well into the nineteenth century, as did many other private institutions that were established in the colonial period. It

*The figure 849 for state institutions includes 175 "state and local" institutions and 2 "state-related" institutions according to the U.S. Office of Education's control-classification. The figure for locally operated institutions excludes 223 that are not classified as institutions of higher education.

was, in fact, customary among the original eastern states to appropriate state revenues directly to private secondary and postsecondary schools and colleges, including church-related institutions.

Originally, one of the principal purposes of state and local support of private postsecondary institutions was to foster the establishment and expansion of higher education in order to provide opportunity for advanced training, primarily in the professions. However, public financing of private institutions was eventually limited primarily to indirect forms of aid, such as allowing such institutions to be exempt from state and local property taxes. But more recently, interest in providing state support to private institutions has been renewed, particularly in those states where private institutions are relatively numerous and have excess capacity that can be used at less expense than would be incurred if new public facilities were built.

In the states that have acted to provide direct or indirect aid to private colleges and universities, the primary justification has been that, without such aid, private institutions would no longer be able to compete for students against heavily subsidized public institutions. Private institutions would thereby lose their ability to provide a diversity of educational experience and to serve students who would otherwise attend tax-supported public institutions. New York's Heald Committee on Higher Education (1960), for example, argued in its report that private institutions should be aided because they "give American education a diversity and scope not possible in tax-supported institutions alone, and they have an opportunity to emphasize, if they wish, individualistic patterns of thought, courses of social action, or political or religious activity." This is an argument that has been repeated in many similar studies in other states during the past decade.

During the 1950s and 1960s, private collegiate institutions grew significantly in enrollment. But they grew much more slowly than did the public institutions because they were not under the

same pressure to accommodate the surge of students then graduating from high school and because large numbers of those students were attracted to two-year institutions, of which relatively few were privately operated. As a result, in the decade from 1960 to 1970, the distribution of enrollment nationally shifted from 59 percent public and 41 percent private to 73 percent public and 27 percent private; and in several states, the shift was even greater.

In the past few years, rising operating costs have continued to widen the gap between tuition charged by public institutions and that charged by private institutions. This gap has further reduced the ability of private institutions to attract students at a time when enrollment growth is ending and some institutions, both public and private, are losing students. To continue to attract students from the lower-income groups, the private institutions must increase their student aid funds, obtained largely from tuition charged higher-income students. This circumstance has meant that many private colleges and universities are having considerable difficulty meeting their enrollment quotas and obtaining budgeted income from student charges.

As a consequence, private colleges and universities have recently increased their efforts to obtain greater direct and indirect support from the state legislatures. The ability of private institutions to obtain greater support is limited, however, by a number of factors—state constitutional provisions regarding the use of public funds to aid private institutions, traditional attitudes among state voters and legislators, and the willingness of the institutions to band together to exert maximum political pressure in their own behalf.

Several state constitutions are very restrictive with regard to use of public funds for private institutions.⁹ But the majority of the state courts have not tended to interpret the state constitutions

narrowly and have generally followed the lead of the United States Supreme Court. Although emphasizing the need for maintaining public neutrality in dealing with church organizations, both state courts and the Supreme Court have determined that when state funds are appropriated for a "public purpose," the principal issue is what specific purpose is to be served and not who handles the money (on the assumption that not all church-related organizations are inherently sectarian.)¹⁰ Thus, to many observers, the question of state aid to private institutions is more a political question than a legal issue. That in 1972 nineteen states provided some form of direct aid to private institutions seems to bear out this judgment. In general, such state support has been provided in those states where private institutions enroll at least 15 percent of the total number of students in all collegiate institutions and where the private institutions have been willing to work together to promote their case before the legislature. Although there is strong political opposition in nearly every state to direct appropriations for institutional operating costs and construction grants for private colleges and universities, there is considerable sympathy for (or little opposition to) instruction contracts, tuition equalization grants, and other forms of student aid, provided that expenditures for these purposes do not have an immediate and substantial impact on support for public institutions.

The greater portion of measurable state and local aid to private collegiate institutions is provided in the form of student financial assistance, either to all students, regardless of whether they attend a public or a private institution, or only to those who attend private institutions. But many states also provide direct or indirect aid to private institutions. In 1971-72, the fifty states and the District of Columbia provided an estimated \$185 million in measurable aid, direct and indirect, to private colleges and universities. Local aid to private collegiate institutions amounted to \$48.5 million in 1971-72.

a. General institutional support

Public institutions of higher education at the state level receive more than 95 percent of their state support and approximately 40 percent of their total support through direct appropriations by the state legislatures. In each state, these appropriations are included in and governed by the annual state budgets that are drawn up either by state budget offices in the executive branch or by legislative appropriations committees. The executive or legislative budget for postsecondary education is usually based in large part on the budget requests submitted by the institutions, and reviewed, in some cases, by state higher education coordinating agencies. In one state, Oklahoma, the statewide governing board submits its budget request directly to the legislature and subsequently allocates the amount appropriated to it among the various institutions under its jurisdiction.

In some states, the institutional budget requests are drawn up by campus financial officers who simply estimate the total spending needs of their institutions for their various functions during the coming fiscal year. Increasingly, however, institutional budget requests for similar institutions are based in large part on formulas that allocate state support according to a certain number of dollars per individual student, student credit hour, full-time equivalent student, or faculty position. The Texas Commission on Higher Education, for example, has drawn up budget formulas for general administration and student services (based on "head-count" enrollment), faculty salaries, departmental operating expenses, libraries (all based on student credit hours), organized research (based on enrollment by level), building maintenance, and custodial services (based on building area and materials) that are used in preparing the budget requests for all public sector colleges and universities in Texas. Tennessee, Oklahoma, Georgia, Ohio, and Louisiana also use formulas of this nature. In a number of other states, including

California, Missouri, and Oregon, various formulas based on costs per credit hour, student-faculty ratios, and other standard measures are used in constructing campus budgets, but in themselves do not always determine the final budget authorization.

In nearly every state in which there is a statewide coordinating agency, there has been an effort to establish unit cost measures as basic budget-building devices, primarily to narrow the scope of negotiations with the individual campuses and to gain some rough equity in the support of comparable institutions. It is true, however, that these budget devices are frequently ignored during the appropriations process, when budgets are adjusted to reflect the actual amount that the legislatures can or will appropriate. But in the case of state support for the current expense of community colleges and special technical schools, more than half the states follow a simplified unit cost approach (for example, \$450 per full-time equivalent student). The unit cost, which may be adjusted from year to year, fixes the total amount to be appropriated each year. Generally, the unit cost is not so much a measure of average cost as a measure of how much the state is willing to provide as its share of the operating expenses of the local institutions. And it is the responsibility of the local governing boards to adjust their programs or the level of support from local funds accordingly. The California Community Colleges, for example, the largest public two-year college system in the country, receive nearly all of their state support according to a formula-based appropriation similar to that used in many states to support elementary and secondary schools.

Another form of general institutional support is financing for student employment. Nearly every state provides some such aid through matching contributions for work-study and support for teaching and research assistantships for graduate students.

Nine states provide some form of general institutional support to one or more private colleges and universities. In a few cases,

such aid has been provided for many years. Pennsylvania, which has provided direct financial assistance to private, nonsectarian colleges and universities since the colonial period, now allocates approximately one-third of its higher education expenditures to private institutions. Pennsylvania provides general institutional support to fourteen private institutions and three "state-related" universities that have become all but indistinguishable from public institutions.¹¹

In other states, however, current programs of direct institutional support of this kind are of relatively recent origin. In 1969, New York, which, of all the states, now has perhaps the most complex and extensive ties with private institutions, began providing "Bundy aid"—flat amounts of aid based upon the number of degrees awarded each year. In 1971-72, the appropriation for this program, based upon \$400 per bachelor's and master's degree and \$2,400 per doctorate, was \$30.5 million. Maryland began granting support to several private institutions in 1962 and 1963; and when such aid survived a court test, the Maryland legislature appropriated nearly \$6.6 million to private colleges and universities in 1965. In 1971, Maryland switched to a program of direct grants similar to New York's "Bundy aid" (providing \$200 per associate degree and \$500 per bachelor's degree), and appropriated \$1.9 million for that purpose for 1971-72. Illinois began its program of general assistance grants to private colleges and universities in 1971, and now provides more than \$6 million in such aid each year, based on a formula of \$100 per full-time freshman and sophomore and \$200 per full-time junior and senior.

b. Categorical aid

In addition to general institutional support, the states provide support for public institutions in the form of direct grants for specific purposes—agricultural research, public service programs, and

others—that are not incorporated in the institutional budgets. Some of this support is provided through other state agencies in the form of grants and contracts for research, special institutional programs, and extension courses. Generally, however, these funds amount to a very small proportion of the income of the institutions and are not comparable to the funds received for these purposes from federal agencies.

For several years, the states have also evidenced considerable interest in providing aid to private colleges and universities for specific purposes—purposes that correspond to particular state needs. Thus, eleven states now provide direct support for private medical and dental schools based on a unit cost per student enrolled or per student enrolled above the enrollment for a base year. The rationale for this type of aid is that it is the least expensive way for a state to maintain or expand its supply of health care personnel. Several states also provide aid for special programs of counseling and tutoring for educationally disadvantaged students. For example, in 1971-72, Pennsylvania appropriated \$700,000 to private institutions for support of remedial programs for disadvantaged students.

Support for specific purposes is provided either by annual grants or under a contractual arrangement whereby the state agrees to pay a fixed amount (often a unit amount) for the educational or other services to be provided. In this way, the state is simply purchasing specific services from a private contractor, much as it would for other purposes. Such contractual arrangements are frequently used for professional training. For example, New York allocated \$1.2 million in 1972-73 for contracts with public and private two-year colleges, four-year institutions, and hospitals to expand their nursing programs. Texas allocated \$6.7 million in 1972-73 for contracts with Baylor University for the medical and dental training of state residents and \$300,000 for a similar contract with the Texas College of Osteopathic Medicine.

c. Capital outlay

State and local governments provide capital outlay funds for public institutions by direct appropriations from current funds, appropriations from bond funds (or, viewed alternatively, for debt service on those bonds if they are not repaid from institutional resources) and by delegating authority to issue bonds. At present, capital outlay expenditures are not well reported and must be derived largely from reported annual increases in plant value. It is estimated, however, that the states provided \$500 million to collegiate institutions for capital outlay in 1971-72, not including interest costs for bond funds.

The common method of providing aid to private colleges and universities for the construction of instructional and other facilities is through bond-financed loans. Eleven states have established state educational facilities authorities that are authorized to make long-term construction loans to private institutions. To obtain the funds, the state authorities are authorized to issue revenue bonds. The fact that these bonds are tax-exempt and that few states have difficulty in selling their bonds means that they can provide ample funds to the private institutions at interest rates well below those the private colleges and universities would have to pay on their own. This is, in effect, a system of subsidized borrowing that increases state costs only to the extent that the sale of such bonds may tend to reduce the market for other state bonds and therefore raise the interest rates charged by the financial institutions that handle them.

New York was the first state to establish an educational facilities agency. The Dormitory Authority of the State of New York has provided funds from tax-exempt bonds for construction of residential facilities on private campuses since 1955. In 1959, this financing was extended to academic facilities and in 1970 to major remodeling, restoration, and modernization of educational buildings. More recently, South Carolina has established a unique program under which

its bond authority is authorized to permit private colleges to issue their own tax-exempt bonds to finance construction projects.

d. Tax exemptions and credits

Another form of public support provided public and private institutions is exemption from state and local taxes—primarily property and sales taxes and state and federal income tax on endowment earnings. Additionally, public as well as private institutions benefit from the tax exemptions and credits granted individuals and corporations that make gifts to the institutions. Unfortunately, there are no reliable estimates of the total value of these exemptions and credits to the institutions.¹²

Two states, Indiana and Michigan, permit individuals and corporations to receive partial credits against state income taxes for gifts to private or public institutions of higher education. In Indiana, the credit is limited to a maximum of \$50 for individuals and \$500 for corporations; in Michigan, the limits are \$100 and \$5,000. Both states adopted these provisions primarily as a way of helping private institutions to raise endowment funds; but in Indiana, at least, recent reports indicate that public institutions are benefiting more than are private institutions. The total amount of tax credits claimed in Indiana in 1971-72 was \$1,128,000.

Like the federal government, many states with personal or corporate income taxes, or both, allow gifts to educational institutions, public or private (nonprofit), as itemized deductions. And in most cases, these states also follow the federal lead in allowing a deduction for tuition payments under certain very limited circumstances. But this arrangement, of course, benefits only those students who have sufficient annual earnings to pay income taxes.

Finally, it is common for states to exempt, fully or partially, all educational institutions from property taxes, sales taxes, and taxes on gasoline used for vehicles required to transport students

to and from campus. Although these exemptions, and especially the property tax exemption, constitute a major subsidy to private higher education, few states attempt to measure the cost. One estimate is that the property tax exemption is equivalent to approximately 15 percent of the current income of private institutions.¹³

e. Other forms of institutional aid

Several states grant private institutions other types of indirect aid. At least three states permit private institutions to participate in centralized state purchasing programs that may gain substantial savings on large volume purchases. Two states, Tennessee and California, have for many years granted private educational institutions the power of eminent domain.

It should also be noted that a large number of smaller states aid private institutions in other states through tuition payments administered by regional agencies. Alabama, for example, contracts through the Southern Regional Education Board for the graduate and professional training that Alabama residents receive in out-of-state institutions. Of the \$133,000 Alabama appropriated for this purpose in 1972-73, at least 90 percent went to private institutions. Similar contracts are administered by the Western Interstate Commission for Higher Education and the New England Board of Higher Education in their regions.

2. Student Financial Aid Programs

In fiscal year 1972-73, the fifty states spent an estimated \$348 million for undergraduate student aid in the form of scholarships and grants, plus a substantial sum for guaranteed and direct loans, tuition waivers and reductions, and various restricted grants to special categories of students. The major scholarship and grant funds went to 748,700 students attending both public and private institutions of higher education (see Table 7). Over the past four years, the

Table 3-7: State Scholarship and Grant Programs,
1969-70 through 1972-73

Awards/Recipients	1969-70	1970-71	1971-72	1972-73
Total Awards (in millions).....	\$191.5	\$230.2	\$291.0	\$348.2
Number of Recipients.....	487,800	587,800	635,500	748,700
Award Funds per Recipient.....	\$393	\$392	\$458	\$465

Source: Annual reports of state scholarship and grant programs compiled by Joseph D. Boyd, Executive Director, Illinois State Scholarship Commission, and supplementary data obtained from individual states.

total figure for scholarships and grants has grown approximately 20 percent per year, a substantially higher growth rate than that for enrollment alone, but probably just enough to keep only slightly ahead of increases in enrollment and tuition combined.

Despite recent increases, state spending for student aid, including the cost of state-administered loan programs and other forms of aid, accounts for no more than 4 or 5 percent of total measurable state and local support for postsecondary education. And this support is unevenly distributed among the states. Six states—California, Illinois, New Jersey, New York, Ohio, and Pennsylvania—account for 78 percent of the total student-aid financing and 67 percent of the student recipients. These are also the states with the largest student populations, but they are not necessarily the states with the largest commitment per student (or per potential student) when student aid and institutional support are added together. It is evident,

however, that there is substantial variation among the states in the amount of aid available to students from low- and middle-income families and that this is a fact that any carefully designed federal student-aid program must take fully into account. For example, Alabama, Arizona, and Nebraska have no programs to aid such students other than tuition waivers provided by individual institutions. California, Connecticut, Illinois, New York, and a number of other states, on the other hand, have developed rather substantial programs of aid for needy students.

Local governments are not important sources of student aid. Locally operated institutions, and especially the two-year community (junior) colleges, generally charge low tuition, and many local jurisdictions have lacked authority to spend tax funds for payments to students. Total student aid from local governments in 1971-72 was \$3.9 million for public institutions and \$2 million for private institutions, according to institutional reports.

Financial assistance to students who attend private collegiate institutions is the principal form of state aid to private colleges and universities. In 1972-73, based upon the figures from those states for which such data are available, it appears that approximately 60 percent, or \$200 million, of the \$348 million provided by the states for grants and scholarships went to students at private colleges and universities. Several states that have low tuition for their public institutions have established student aid programs that are available only to students attending private institutions—a form of aid that is commonly referred to as tuition equalization.

Student aid has been the most popular form of state aid to private institutions, not only because it expands student opportunities to attend the institution best suited to each individual's needs, but also because it presents little or no constitutional problem in most states. The basic purpose, it can easily be argued, is to expand access and choice rather than to help support any particular

kind of institution. And because most state programs cover only tuition or tuition and other mandatory fees, the greater part of this aid usually goes to students at private institutions, where the tuition is much higher. The fact that their students receive such aid enables the private institutions to use their own student-aid funds either to attract more students, to enrich their existing aid efforts, or for some other purpose. (It should be noted, however, that the tuition and fee income, partly from state scholarship aid, meets only part of the cost of educating each additional student.)

a. Competitive scholarships

Traditionally, the largest states have favored competitive scholarship programs, based on need and merit. These programs provide aid to cover the greater part of the cost of tuition and other mandatory fees at the public or private institution of a student's choice. New York, California, Massachusetts, Michigan, Indiana, and ten other states support large programs of this type. In several states, the number of new awards has been tied to a percentage of the previous year's high school graduates. Ordinarily, students may not use these awards to attend out-of-state institutions, although Connecticut and New Jersey permit their award winners to do so.

b. Noncompetitive tuition grants

More and more states are providing grants of up to \$800-1200 per year to all students who are determined to be in need of aid. The grants are usable at either public or private institutions. In most cases, however, the grant is limited to the total cost of tuition and other mandatory fees; and it does not, therefore, assist in meeting subsistence costs, even at low-tuition public institutions. Ohio, Illinois, Massachusetts, New York, Tennessee, Pennsylvania, and ten other states provide aid of this sort. Pennsylvania's program, the largest of its type, is unique in that it is open to students who

attend proprietary schools as well as to those who attend traditional colleges and universities. Vermont and several other states provide grants that are available to student residents who enroll in out-of-state as well as in-state institutions. It should also be noted that an increasing number of states provide a combination of competitive and noncompetitive awards.

c. Educational opportunity grants

A few states now provide aid intended primarily for "disadvantaged" students—students who come from low-income families and/or have marginal records of achievement. Generally, these grants are intended to cover some part of subsistence costs as well as tuition and other fees. New York, California, and New Jersey are among the states that operate large programs of this nature. In addition, several states provide special scholarships, grants, or tuition waivers to American Indians.

d. Tuition equalization grants

At least nine states, including Alaska, Georgia, Iowa, Nebraska, and New Jersey, now provide grants limited to students who attend private institutions. These grants are intended to offset the difference in tuition rates between public and private institutions. In some cases, they are available only for students who enroll in private institutions; in others, the same objective is achieved by providing that the institution at which the student enrolls must be one that charges a rate of tuition above that of the state's public institution with the highest tuition. This type of program has become increasingly popular in those states where there is considerable concern for the financial problems of private institutions and in which the private institutions have an effective voice in the legislature. In at least three states, however—Nebraska, Washington, and Kentucky—such programs are undergoing court tests as to their constitutionality.

e. Grants for enrollments in other states

Quite a few states offer a limited number of grants to students who must attend out-of-state institutions to obtain the courses they want. Delaware operates its own program of this type, but most states do so through a major regional association such as the Western Interstate Commission for Higher Education and the Southern Regional Education Board.

f. Guaranteed student loans

Twenty-four states administer their own guaranteed student loan program in cooperation with the federal government. In general, these are quite similar to the federally-administered guaranteed loan program. Five states have contracted with a private agency for this purpose; two states, Wisconsin and Texas, are themselves the financing agent for loans made directly to the students. The remaining nineteen states rely on the U.S. Office of Education to administer the federally-guaranteed loans. Only the subsidized portion of such loans is properly considered as student aid, inasmuch as the students themselves or their parents must eventually pay the unsubsidized portion.

g. Direct student loans

At least seven states provide direct student loans that are similar to the federally-sponsored National Direct Student Loans. A majority of the loans are limited to students in particular training programs, such as teacher training. Again, only the subsidized portion is counted here as student aid.

3. Trends in State Support

In the past two years, eight states—Kentucky, Missouri, Nebraska, Oklahoma, New Hampshire, North Carolina, South Carolina, and Virginia—have launched new comprehensive scholarship or grant programs. This

year the legislatures of several other states are considering legislation to provide new forms of aid or to expand existing programs substantially. Much of the impetus behind this action comes from a growing concern for the financial stability of private institutions and a closely related interest in increasing student choice to the greatest possible extent. As a consequence, proposed increases in student aid have been more popular with the governors and legislators of the fifty states than proposed increases in direct support to institutions.

Continued growth in state student aid programs is probable for the next few years, especially in the form of non-competitive grants for students attending public and private institutions (possibly with some increase in tuition at public institutions) and tuition equalization grants for students who enroll in nonsectarian private institutions. Pennsylvania now operates a grant program available for students who enroll in proprietary institutions; and if federal support is provided to match state grants as authorized under the Education Amendments of 1972, state aid to students attending proprietary institutions will increase substantially.

There is particularly strong interest now in many states in increasing aid to private institutions. As representatives of private colleges and universities have become more effective at presenting evidence of the financial problems faced by their institutions and at suggesting how the states can help without violating constitutional prohibitions, state legislators have become increasingly receptive to their arguments. This interest has received further impetus from the growing concern for expanding student choice and the knowledge that many private institutions may have unused instructional capacity. As a consequence, in the past three years, nearly every legislature in states in which there are several private institutions has considered at least

one proposed new form of student assistance, and many new programs have been adopted.

In 1971, California expanded its scholarship program and established a program for contracting with private medical schools for increased enrollment; Illinois enacted its financial assistance program for "nonpublic" institutions and appropriated nearly \$6 million in first-year grants; Minnesota adopted a program of grants to private, nonprofit colleges to encourage enrollment growth; and Oregon authorized its state scholarship commission to contract with private institutions for undergraduate instruction for state residents. In 1972, there was even more action along these lines: Connecticut liberalized its program of grants for general institutional support; New Jersey appropriated \$7 million for its first major program of direct assistance; Alaska began offering tuition equalization grants of up to \$1,400; Tennessee authorized contracts with two private institutions for the instruction of state residents; and Missouri considered two new proposals, and finally adopted a program of student aid designed to ensure substantial support for students attending private colleges and universities.

In several states where both public and private institutions have stopped growing and where there is prospect for an actual decline in total enrollment in the collegiate sector over the next five years, the friction between public and private institutions has increased considerably. But where the public institutions have sought to stop new proposals for aid to private institutions, they have been unable to do so. Interest in such aid remains relatively strong in many states. State legislators and other public officials have increasingly come to see public and private institutions of postsecondary education as two organizational forms with essentially the same purpose. These officials are therefore increasingly receptive to the idea, within the limits of their state constitutions, of increasing direct and indirect aid to private institutions within the limits of their state constitutions to take advantage of unused capacity wherever it exists.

Federal Support for Postsecondary Education

The federal role in providing financial support for postsecondary education dates back to the Morrill Act of 1862, but it has been only in the past two decades that federal aid has assumed the importance it has today. In 1951-52, federal expenditures for postsecondary education amounted to no more than \$500 million.¹⁴ Nearly ten years later, however, following passage of the National Defense Education Act in 1958, federal support had risen to \$2 billion.¹⁵ By 1971-72, federal spending for postsecondary education had reached \$8.1 billion,* largely as a consequence of the earlier legislation, growth in student assistance provided by the Veterans Administration, and passage of several new pieces of legislation, including the Higher Education Academic Facilities Construction Act of 1963, the Higher Education Act of 1965, and the Higher Education Amendments of 1967 and 1968.

This rapid growth in federal spending began in the years immediately following World War II, when thousands of veterans took advantage of their G.I. Bill benefits to enroll in colleges, universities, and trade schools. Starved for enrollment only a few years earlier, these institutions suddenly found themselves overwhelmed with students whose tuition was paid directly by the federal government. Then, after most of these students had departed, but before a new wave of veterans arrived from the Korean War, federal spending took a different course. By the mid-1950s, largely as a part of national defense policies, the federal government had generated a massive demand for science and scientists; and it then attempted to satisfy that demand by unprecedented expenditures for research and development in federal facilities, industry, and universities.¹⁶ Between 1954 and 1964, expenditures on basic research alone rose at an annual rate of nearly

*This figure does not include \$1.1 billion that goes to students attending collegiate and noncollegiate institutions to help them pay their ordinary living costs.

30 percent, and the nation's leading universities received a substantial share of the new money. According to figures compiled by the National Science Foundation, total federal expenditures for research and development rose from about \$1 billion in 1950 to a peak of \$17 billion in 1967; universities received about 15 percent of this total.¹⁷

As spending for research grew in the late 1950s and early 1960s, the federal government also began to expand its interest to include not only the training and support of scientists, but also the preparation of school teachers and college faculty and the improvement of instruction in several fields, such as mathematics and foreign languages. To the financial assistance provided veterans and survivors of Social Security beneficiaries (which some classify as deferred earnings rather than student aid) was added the first federal student loan program—National Defense Student Loans. And, also for the first time, the federal government began providing direct aid, on a matching basis, for the construction of instructional facilities.

In 1965, as spending for research began to reach a peak, the federal role in supporting students and institutions was partially consolidated by the Higher Education Act, which initiated a program of federal grants to low-income students, a new guaranteed loan program, support for university community service programs, additional aid for acquisition of instructional equipment, and authorization for project grants to "developing" institutions. In the same year, the Health Professions Education Assistance Amendments provided scholarships for students in the medical professions as well as increased institutional aid to improve the quality of teaching in these fields.

In legislation that followed, the federal role was steadily broadened, with increasing emphasis on student aid and on vocational training at the postsecondary level to promote access and choice for low-income students. By the end of the decade, according to the U.S.

Office of Education's annual survey of institutional income and expenditures, federal support for postsecondary institutions in the collegiate sector amounted to 12.3 percent of the income of public institutions and 12.8 percent of the income of private institutions. In addition, the federal government was providing approximately \$3 billion in financial aid directly to the students themselves.

Each new federal program enacted during this period carried with it a specific rationale or objective, but the growth of federal support generally has been justified primarily on one of two grounds. Either it has come as an extension of an existing federal policy (for example, educational benefits to veterans), or it has been an expression of concern that state and local government, if left with the whole responsibility, might be unable or unwilling to provide adequate support for postsecondary education.¹⁸ It is frequently argued that states may be unwilling to provide sufficient financing because they are concerned only with the interests of and benefits to their own future residents and cannot be asked to respond to national work-force needs that are not evident locally. It has also been argued that states will inevitably have differing standards of public responsibility for aiding those who may be deprived of educational opportunity because of low income or racial or ethnic discrimination. To the extent that states try to meet their citizens' needs by providing low-price public collegiate institutions, they cause financial distress for private institutions, which they are often discouraged from aiding for political and constitutional reasons. Therefore, the federal role, in large part, has been to give direct and indirect encouragement to the training of persons with specific skills that are believed to be in short supply nationally, to attempt to equalize educational assets across state lines, and to provide support that will assist private institutions that serve important educational objectives.

Federal Programs and Administration

A careful examination of the *Catalogue of Federal Domestic Assistance* for 1972, published by the Office of Management and Budget, has yielded a list of approximately 380 separate programs of support for postsecondary education administered by more than 20 federal agencies (excluding a number of programs and authorizations administered by the Departments of Defense, State, Interior, and Treasury, and several other agencies).¹⁹ Yet this apparent dispersal of purpose and administration should not be allowed to obscure the fact that most of these programs can be described as serving one of five purposes: support for research in areas of national interest; equal access to postsecondary education for low-income and other educationally disadvantaged students; strengthening collegiate institutions of certain types and strengthening all collegiate institutions in certain functions; work-force training to increase the supply of skilled persons in critical occupations and to expand employment opportunities for unskilled persons; and special benefits to certain classes of persons, such as veterans, survivors of Social Security beneficiaries, and handicapped and disabled persons.

Moreover, a majority of these programs are administered by only a few of the total number of agencies involved with postsecondary education. In fiscal 1972, approximately 90 percent of federal expenditures for postsecondary education were administered by just five agencies: the Department of Health, Education and Welfare, the Veterans Administration, the Departments of Defense and Labor, and the National Science Foundation. These five agencies are listed in Table 8, together with their estimated fiscal 1972 outlays.

Like state and local governments, the federal government employs a wide variety of financing mechanisms to carry out its purposes; but, as the following discussion will indicate, the bulk of federal expenditures takes the form of categorical aid to institutions and financial assistance to specific groups of students.

Table 3-8: Selected Postsecondary Education Outlays,
by Major Participating Agencies, Fiscal 1972

(In millions)

Agency	Amount	Percent of total
Department of Health, Education, and Welfare.....	\$4,090.4	44.3%
Veterans Administration.....	2,006.5	21.7
Department of Defense.....	1,082.6	11.7
Department of Labor.....	898.2	9.7
National Science Foundation.....	390.2	4.2
Subtotal.....	\$8,467.9	91.7%
All Other Agencies.....	769.0	8.3
Total.....	\$9,236.9*	100 %

Source: Data supplied by the individual agencies.

*Includes an estimated \$1.1 billion in student aid that helps students meet their normal living costs. This amount is excluded from the figure of \$8.1 billion reported elsewhere in this chapter as total federal aid to postsecondary education.

Financing Mechanisms: Institutional Support

Institutional support from federal sources amounted to \$4.2 billion in 1971-72, or about 52 percent of the federal outlay for postsecondary education (excluding student subsistence support). Institutional support includes expenditures for federal institutions, support for developing institutions, research and development, construction of instructional facilities, instruction in certain areas of special federal interest, and contributions to the budgets of the land grant colleges and universities. By far the greater portion of measurable support is distributed in the form of categorical aid. Because there are so many individual federal programs, it is impossible

in a short space to list and briefly describe each one according to the appropriate financing mechanism. Therefore, in the following paragraphs, only the largest programs are discussed, and only in terms of participants and expenditures.

1. General Institutional Support

The federal government provides general institutional support through the federal budget to these institutions of postsecondary education: the four service academies, the U.S. Merchant Marine Academy, the Air Force Institute of Technology, the U.S. Navy Postgraduate School, and Howard University. This support amounted to \$235 million in 1971-72. In addition, a relatively small amount of general aid—\$12.6 million—was provided to the 72 land-grant colleges and universities under the provisions of the Bankhead-Jones Act and the Second Morrill Act.

The College Work-Study program (CWS) is often classified as a student aid program; but, inasmuch as it primarily provides funds to institutions for the employment of students, it is included here as institutional support, just as are federal support for teaching and research assistantships and state budget support for campus jobs that may be filled by students. (Other federal funds for the employment of students have also been classified as institutional aid when it has been possible to separate them from funds for other purposes.) CWS program funds are restricted to the support of salary costs but may be used in virtually every aspect of institutional operation. Therefore, it appears more appropriate to categorize CWS funds as general institutional support than as categorical aid. CWS expenditures for 1971-72 amounted to \$250.1 million.

2. Categorical Aid (Current)

At least 85 percent of the 380 federal programs that provide funds for postsecondary education may be classified as categorical

aid; that is, the funds are allocated to the achievement of some specific purpose rather than as general aid to be expended according to the wishes of the recipient institution or agency. The greatest amount of current categorical aid goes for research and development administered by the National Institutes of Health and the National Science Foundation. In fiscal year 1972, these two agencies accounted for a total of \$1.7 million (obligations) to support research and related activities. Table 9 shows the trend in total federal research and development funds going to colleges and universities between fiscal years 1967 and 1971. National Institutes of Health research grants for fiscal years 1968, 1970, and 1972 are shown by program in Table 10.

National Science Foundation funds go for the support of scientific research in physics, chemistry, astronomy, mathematics, the biological, atmospheric, and earth sciences, oceanography, engineering, social sciences, and materials research. Project funds commonly provide support for salaries of professional and supporting personnel, equipment, travel, publication costs, and institutional overhead. Colleges and universities were to receive an estimated 22 percent of total federal expenditures for research and development in 1971-72.

Table 3-9: Federal Obligations for Research and Development in the Collegiate Sector, Fiscal Years 1967 through 1971

	FY 1967	FY 1968	FY 1969	FY 1970	FY 1971
Total Federal Spending for R & D (millions).....	\$15.6	\$15.9	\$15.6	\$15.3	\$15.5
Amount to Universities and Colleges (millions).. <td>\$3.3</td> <td>\$3.4</td> <td>\$3.5</td> <td>\$3.2</td> <td>\$3.5</td>	\$3.3	\$3.4	\$3.5	\$3.2	\$3.5
Percent of Total.....	21%	21%	22%	21%	22%

Source: National Science Foundation, *Federal Support to Universities and Colleges and Selected Nonprofit Institutions*, FY 1971; NSF Databook, 1972 and 1973.

Table 3-10: NIH Research Grants, by Program,
Fiscal Years 1968, 1970, 1972

Program*	Number of Grants		
	FY 1968	FY 1970	FY 1972
<u>Research Projects</u>			
Traditional.....	11,601	9,798	9,680
Chemotherapy & psychopharmacology....	121	178	211
U.S.-Japan cooperative medical science program.....	81	109	107
Computer technology health care demonstration.....	-	-	-
International centers for medical research and training.....	5	4	4
Nursing.....	39	31	37
Other.....	177	55	91
<u>Program Projects and Centers</u>			
Research program projects.....	363	399	515
General clinical research centers....	93	93	83
Categorical clinical research centers.....	71	56	59
Specialized centers of research.....	-	-	43
Animal resources.....	58	68	82
Biotechnology resources.....	50	41	44
Dental research institute program....	5	5	8
Pharmacology-toxicology centers.....	11	10	13
Sickle cell centers.....	-	-	10
Environmental health centers.....	10	6	6
Outpatient clinical research program.....	14	18	24
<u>General Research Support Programs</u>			
General research support grants.....	311	344	339
Biomedical sciences support grants...	102	113	117
Health sciences advancement awards...	9	11	5
Minority schools biomedical support..	-	-	38
Total.....	13,121	11,339	11,524

Source: U.S. Department of Health, Education, and Welfare, National Institutes of Health, *Basic Data Relating to the National Institutes of Health* (Washington, D.C., 1973).

*Ranked by amount of award in FY 1972.

The major programs of categorical assistance for instruction are administered by the Office of Education, the Department of Agriculture, and, again, the National Institutes of Health. The largest programs administered by the Office of Education in fiscal year 1972 were those providing support for adult and vocational education. Under a program of basic grants to the states, the Office of Education provided an estimated \$161 million for vocational education at the postsecondary level. This aid is distributed among the states according to a formula, and the states are required to match the federal funds on a 50/50 basis. Additional support was provided on a fixed formula and project grant basis to support consumer and homemaking education, cooperative education, vocational curriculum development, work-study arrangements, exemplary programs and projects, and special vocational programs for persons having academic, socio-economic, or other social handicaps.

Aid to developing institutions, first authorized by the Higher Education Act of 1965, rose to \$35.8 million (expenditure) by fiscal year 1972. (The appropriations for 1973 and 1974 are \$87.5 million and \$99.9 million.) These funds are intended to support cooperative arrangements for the exchange of faculty and students, the improvement of institutional administration, the introduction of new curricular materials, and the joint use of facilities, such as libraries and laboratories. Selected program data for the Developing Institutions program are shown in Table 11. The 226 institutions receiving grants in fiscal 1972 included 54 public four-year colleges, 98 private four-year colleges, 56 public two-year colleges, and 18 private two-year colleges.

Support for agricultural extension, administered by the Department of Agriculture, amounted to \$169.8 million in fiscal 1972. Under this program, grants are available to state land-grant institutions on a formula basis for approved projects. An additional \$63 million was expended through the Hatch Act program of payments to agricultural

Table 3-11: Selected Program Data for the Developing Institutions Program, Fiscal Years 1968, 1970, 1972

	FY 1970	FY 1971	FY 1972
Total Number of Institutions Receiving Grants.....	220	227	226
Total Number of Developing Institutions Aided.....	367	442	556
Total Grants (obligations in millions).....	\$30.0	\$30.0	\$51.9
Amount to Black Colleges (obligations in millions)...	\$14.4	\$17.0	\$31.0

Source: U.S. Office of Education, Bureau of Higher Education, Division of College Support, mimeographed materials.

experiment stations, most of which are connected with land-grant institutions in each state.

The largest program of categorical aid for occupational training is administered by the Bureau of Health Manpower Education in the National Institutes of Health. In fiscal 1972, this bureau supported 2,553 formula and project grants to institutions, totaling approximately \$323 million (obligations) for the training of physicians, dentists, nurses, and other personnel in the health professions and allied fields.

3. Construction Aid

A number of federal agencies provide, or have recently provided, aid for the construction of postsecondary education facilities. Under

the provisions of the Higher Education Academic Facilities Construction Act of 1963, the Office of Education administered matching construction grants for public and private institutions that reached a peak of \$527 million in obligations in 1965-66. As the demand for new facilities to house college and university students has declined, this program has been phased out. The Office of Education's principal activity in this area now is to administer an interest subsidy program for privately-financed construction. The other two agencies that administer large-scale construction aid programs are the National Institutes of Health (NIH) and the Department of Housing and Urban Development (HUD). NIH construction supported schools of nursing and medicine and, recently, facilities for cancer research. HUD funds supported the construction of college dormitories, but this program has been phased out.

4. Tax Benefits

Perhaps the most important tax benefit that the federal government provides educational institutions is the tax deduction for voluntary contributions to nonprofit institutions (Section 501 (c)(3) of the Internal Revenue Service Code). This provision undoubtedly encourages gift giving, and particularly the donation of appreciated property, the income from which would be heavily taxed if the property were sold. In addition, the endowment earnings of all public and nonprofit educational institutions are exempt from federal capital gains taxes. There is no precise measure of the importance of either of these benefits, however, or of their cost to the federal government in lost revenue, although they undoubtedly play an important part in helping to generate the more than \$2 billion in private gifts to postsecondary institutions each year.

5. Other Institutional Aid

In addition to the forgoing support programs, the federal government aids postsecondary institutions through various provisions for

the use of federal property, facilities, and equipment. The surplus property donation program is one major example of this form of federal support. Under this program, the General Services Administration turns surplus equipment and materials over to the Department of Health, Education and Welfare to be distributed to designated state agencies. These agencies give the property to eligible health and educational institutions. GSA also makes surplus real property available. Over \$291 million worth of real and personal property (original acquisition cost) was donated in fiscal 1972 to educational institutions, including some secondary schools.

Financing Mechanisms: Student Aid

Student financial aid appears to be the fastest growing form of federal support for postsecondary education. By fiscal 1972, student aid from federal sources had reached an estimated \$5.0 billion, or 44 percent of total federal aid and 55 percent of federal aid exclusive of research and development expenditures. Approximately \$3.9 billion of this total was used by students to pay tuition and other fees, with the remainder applied to normal living costs. This was, of course, before the passage of the Education Amendments of 1972, the full financing of which would result in a further sharp increase in federal aid to students.

1. Grants and Scholarships

The largest federal student aid program is the G.I. Bill, which provides assistance for up to 36 months of full-time schooling or on-the-job training for eligible veterans and servicemen. With the release of a large number of Vietnam War veterans, the total number of veterans and servicemen receiving educational benefits (under the G.I. Bill and other programs) rose to over 1,653,000 in fiscal 1972, with approximately 1,064,000 at the college level and 594,000 receiving vocational-technical training at the postsecondary level.

Veterans Administration (VA) expenditures for this program amounted to nearly \$1.8 billion in fiscal 1972. In addition, war orphans and widows of veterans received educational assistance amounting to \$76.1 million that year. Vocational rehabilitation training for disabled veterans, which provides for the cost of books, tuition, fees, and training supplies among other items, is also administered by the VA, with expenditures of \$64.7 million in fiscal 1972. Table 12 shows the number of participants in these programs who were enrolled in collegiate institutions in fiscal years 1970, 1971, and 1972. The VA does not report number of participants in noncollegiate institutions.

The Social Security Administration is another major source of student aid. In fiscal 1972, the Social Security Administration

Table 3-12: Total Recipients of Veterans' Benefits in Collegiate Institutions, Fiscal Years 1970, 1971, 1972

Program	FY 1970	FY 1971	FY 1972
Post Korea Educational Assistance.....	677,240	917,389	1,064,513
Children Educational Assistance.....	40,695	45,383	49,252
Wives and Widows Educational Assistance.....	3,884	5,326	6,474
Vocational Rehabilitation for Disabled Veterans..	14,928	20,116	22,097

Source: U.S. Department of Veterans' Affairs, *Veterans' Benefits Under Current Education Programs* (June 1972), p. 4.

administered \$475.3 million in benefits to 432,863 students who were the children of retired, disabled, or deceased Social Security beneficiaries.²⁰

The principal student grant program administered by the U.S. Office of Education in fiscal 1972 was the Education Opportunity Grant (EOG) program. Under this program, the federal government provided grants of up to \$1,000 for students with "exceptional financial need" enrolled in institutions of higher education. The funds are allocated to institutions, which must match each grant with other federal or nonfederal aid. EOG grants totaling \$210.3 million were obligated in fiscal 1972 to participating institutions, which awarded them to students.

Two other large student grant programs are administered by the National Institutes of Health and the Department of Labor. In conjunction with its institutional aid programs for health manpower training, NIH's Bureau of Health Manpower Education administers a program of grants that provided funds for approximately 39,000 students in the health sciences in 1971-72. Program obligations in that year totaled over \$200 million. The Department of Labor administers a number of work-force training programs intended primarily to train unemployed persons in new skills. These programs and the numbers of their participants are shown in Table 13.

2. Loans

The two principal federal loan programs are the National Direct Student Loan program (NDSL, formerly titled National Defense Student Loan Program), which began in 1958, and the Guaranteed Student Loan program, which was authorized by the Higher Education Act of 1965. NDSL loans are provided to undergraduate and graduate students through the institutions they attend at subsidized low interest rates. This program now permits undergraduates to borrow up to \$5,000 and graduate students to borrow up to a total of \$10,000, including loans received

Table 3-13: Trends in First-Time Enrollments in Selected Workforce Programs, Fiscal Years 1968, 1970, 1972

Manpower Programs	FY 1968	FY 1970	FY 1972
MDTA Institutional Training.....	140.0	130.0	150.6
Neighborhood Youth Corps - Out of School.....	93.8	46.2	65.0
Operation Mainstream (partial)...	6.3	6.3	15.2
Concentrated Employment Program.....	53.0	110.1	84.7
Work Incentive Program.....	-	92.7	120.6
Job Corps.....	-	42.6	49.0
Totals.....	293.1	427.9	485.1

Source: U.S. Department of Labor, *Manpower Report of the President* (Washington, D.C., 1973).

*Manpower Development Training Act.

for undergraduate study. Guaranteed student loans, or Federally Insured Student Loans as they are officially titled, are loans made to students by banks, credit unions, savings and loan companies, and designated public agencies. In recent years, over 200 educational institutions have themselves become lenders. These loans are insured against default by the federal government. The Guaranteed Loan program also has been continued, with modification, by the Education Amendments of 1972. Undergraduates are eligible for a maximum loan of \$2,500 per academic year, and graduate students are eligible for an aggregate of \$10,000 in loans. For students who are eligible for interest benefits, the federal government pays the total interest due

to the lender until the students are required to begin repayment. Table 14 shows the growth in these programs since 1968.

3. Tax Benefits

The federal government provides three types of tax benefits to students: (a) exemptions from taxation of scholarship and fellowship grants; (b) deduction from taxable income of certain educational expenses necessary for current employment; and (c) deduction from taxable income of interest paid on student loans (as well as other loans). As with institutional tax benefits, there are no measures of the costs of these exemptions and deductions to the federal government in lost revenue.

Table 3-14: Trends in Office of Education Student Loan Programs, Fiscal Years 1968, 1970, 1972

Recipients/Obligations	Estimated No. of Total Loan Recipients	Federal Obligations* (in millions)
Fiscal Year 1968		
NDSL.....	429,000	\$181.7
Guaranteed loans....	515,408	37.6
Fiscal Year 1970		
NDSL.....	425,144	\$194.2
Guaranteed loans....	921,325	113.9
Fiscal Year 1972		
NDSL.....	614,200	\$291.7
Guaranteed loans....	1,256,299	231.2

Source: U.S. Office of Education, *Factbook: Summary of Program Information, Through Fiscal Year 1972* (Washington, D.C., 1973).

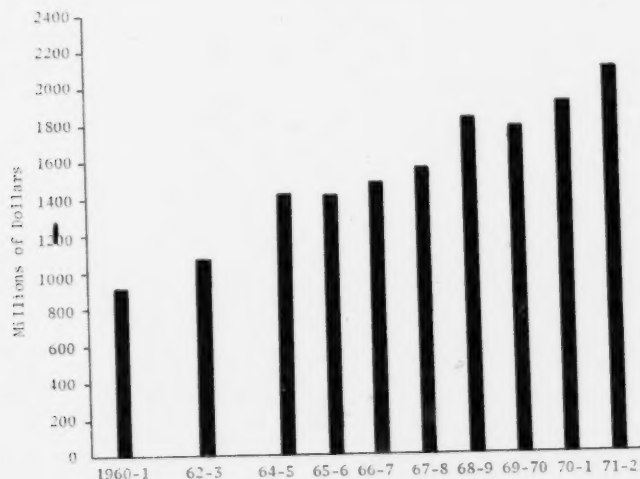
*Obligations for the Guaranteed Loan program do not include monies in the student loan insurance fund.

Private Philanthropy and Endowment Income

Philanthropic giving is the oldest and still one of the most important sources of support for postsecondary education in this country. In 1971-72, private donors—that is, alumni, corporations, foundations, charitable organizations, religious groups, and individuals—provided an estimated total of slightly more than \$2.02 billion for the support of institutions in the collegiate sector.²¹ Institutions in the noncollegiate sector received an estimated \$56 million, bringing the total of \$2.08 billion, or about 9 percent of charitable giving for all purposes reported for that year.²²

Private philanthropy has grown substantially over the past decade, and, as shown in Figure D, has more than doubled since 1960-61. In the past five years, however, voluntary support for collegiate institutions has barely kept pace with enrollment growth and thus has declined as a percentage of total institutional expenditures (see Table 15). Income from gifts and grants, plus endowment income, fell from approximately 9.3 percent to 7.9 percent of total income for collegiate institutions.²³

Figure 3-D: Voluntary Support for Collegiate Institutions, 1960-61 through 1971-72



Source: *Voluntary Support for Education, 1971-72*, Council for Financial Aid to Education (New York, 1973), p. 5.

Table 3-15: Voluntary Support of Collegiate Institutions, Relative to Enrollment and Purchasing Power, 1966-67 through 1971-72

Cost/Enrollment	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72	% Change 1966-67: 1971-72
Total Estimated Support (millions) ...	\$1,450	\$1,570	\$1,800	\$1,780	\$1,860	\$2,020	+39.3%
Enrollment (thousands)	6,390	6,912	7,513	8,005	8,581	8,949	+40.0
Support Per Student	\$227	\$227	\$240	\$222	\$217	\$226	-0.5
Consumer Price Index (1967=100)	98.2	102.1	107.0	113.1	118.8	123.3	+25.6
Support Per Student in 1967 Dollars ..	\$231	\$222	\$224	\$196	\$183	\$183	-20.7
Total Expenditures (billions)	\$17.5	\$19.9	\$22.1	\$24.7	\$27.4	\$29.9	+70.9
Total Expenditures Per Student	\$2,740	\$2,880	\$2,940	\$3,090	\$3,190	\$3,340	+21.9

Source: Council for Financial Aid to Education, *Voluntary Support of Education, 1971-72* (New York, 1973), p. 4.

This is not the complete picture, however, for a portion of private giving goes into endowment funds that produce income in the form of earnings from investments. In 1970-71, the most recent year for which consistent data are available, the average annual yield on endowment funds was 4.7 percent.²⁴ Total reported income from endowment funds doubled, rising from \$231 million to \$463 million between 1961-62 and 1971-72. The book value of endowment funds rose from \$5.6 billion in 1959-60 to \$10.9 billion in 1969-70.²⁵

Major Sources of Philanthropic Support

The amount of philanthropic support received by slightly more than 1,000 reporting institutions from each of the major sources is shown in Table 1f. Throughout the decade, gifts from alumni and other individuals have consistently accounted for nearly half of all voluntary support. Gifts from foundations, which now account for another 25 percent of total gifts, appear to have increased substantially over the decade while gifts from corporations have grown less rapidly.

Gifts of more than \$5,000 each amount to only about 5 percent of the total number of gifts; but they account for approximately three-fourths of the total amount received by all institutions, according to a survey of voluntary support in 1970-71.²⁶ There is some variation, however, by type of institution in this regard. Private men's colleges reported that over 99 percent of their gifts were in amounts of less than \$5,000 and that such gifts provided 42 percent of their total income from gifts. Major private universities, on the other hand, reported that 92 percent of their gifts were in amounts of less than \$5,000 and that such gifts produced only 14 percent of their total gift income.

Gifts may take many forms: cash, securities, property, deferred gifts (such as annuities), insurance policies, life income contracts,

Table 3-16: Voluntary Support of Reporting Collegiate Institutions,
by Source, 1962-63 through 1971-72

(In thousands)

Source of Voluntary Support	1962-63	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72
No. of Inst's..	1,036	1,064	1,033	1,042	1,043	1,013	1,045	1,080	1,093
Alumni.....	\$220,907 (24.2%)	\$248,401 (20.0%)	\$265,558 (21.5%)	\$277,746 (21.9%)	\$307,477 (22.4%)	\$352,652 (24.3%)	\$314,348 (21.3%)	\$372,962 (24.6%)	\$392,460 (23.8%)
Other Individuals.....	197,179 (21.6%)	309,692 (24.9%)	299,945 (24.3%)	319,918 (25.2%)	349,459 (25.5%)	366,146 (25.1%)	365,547 (24.8%)	390,266 (26.6%)	401,397 (24.4%)
Foundations.....	212,720 (23.4%)	357,601 (28.7%)	304,107 (24.8%)	289,532 (22.8%)	320,982 (23.4%)	352,321 (24.1%)	359,316 (24.4%)	341,079 (22.5%)	426,596 (25.9%)
Business Corporations....	146,688 (16.1%)	173,986 (14.0%)	195,705 (16.0%)	213,194 (16.8%)	213,787 (15.6%)	220,569 (15.1%)	222,416 (15.1%)	210,949 (13.9%)	223,183 (13.6%)
Religious									
Denominations.....	80,289 (8.8%)	90,115 (7.2%)	92,575 (7.5%)	91,536 (7.2%)	102,014 (7.4%)	81,275 (5.6%)	83,358 (5.7%)	84,827 (5.6%)	81,825 (5.0%)
Nonalumni, Nonchurch									
Groups.....	38,093 (4.2%)	45,326 (3.6%)	59,086 (4.9%)	59,948 (4.7%)	60,750 (4.4%)	65,690 (4.5%)	99,194 (6.8%)	77,924 (5.1%)	91,086 (5.5%)
Other Sources.....	15,487 (1.7%)	19,694 (1.6%)	12,818 (1.0%)	18,094 (1.4%)	17,089 (1.3%)	22,226 (1.5%)	28,130 (1.9%)	25,830 (1.7%)	30,060 (1.8%)

Source: Council for Financial Aid to Education, Voluntary Support
of Education, 1971-72 (New York, 1973), p. 67.

and so on. Among gifts under \$5,000, cash gifts account for about 95 percent of the total, with securities 4 percent, and property and other gifts 1 percent. Among gifts of \$5,000 or more, 67 percent are cash gifts, 29 percent are securities, 2 percent are real estate, and 2 percent are in other forms.²⁷

Recipients of Private Philanthropy

The major private universities receive the greatest share of voluntary support for collegiate institutions—nearly 42 percent in 1971-72. Next are the private coeducational colleges with 25 percent, and the four-year public institutions with slightly less than 25 percent. Although the relative shares have fluctuated somewhat over the past ten years, as shown in Table 17, public institutions appear to have gained over this period while private men's and women's colleges and professional and specialized schools appear to have lost voluntary support (although this trend may reflect changes in institutional status—for example, some non-coed institutions have become coed—as well as changes in the pattern of private giving).

Financing Mechanisms: Institutional Support and Student Aid

The manner in which private philanthropy is reported does not permit detailed analysis by financing mechanism, but a rough classification is possible according to the reporting categories employed by the Council for Financial Aid to Education (CFAE).

1. Institutional Support

Although there is no reliable reporting of voluntary support in the form of financial aid that goes directly to students, it appears that 80-85 percent of all private philanthropy takes the form of institutional support. Of this amount, only about 30 percent is provided as general (unrestricted) institutional support. The most recent data show that 53.3 percent of voluntary support is for current expense and 46.7 percent for capital outlay (see Table 18).²⁸

Table 3-17: Voluntary Support for Reporting Collegiate Institutions,
by Institutional Type, 1962-63 through 1971-72
(In thousands)

Year	Major Private Univ.	Private Coed. Colleges	Public Inst's	Prof. & Special. Schools	Private Women's Colleges	Private Men's Colleges	Junior Colleges	Total
Amount								
1962-63	\$364,080	\$210,158	\$144,824	\$78,604	\$48,604	\$48,423	\$16,669	\$911,363
1964-65	477,743	304,220	195,286	99,265	75,046	75,455	17,801	1,244,815
1965-66	444,201	276,770	242,892	119,330	66,594	59,521	20,486	1,229,794
1966-67	481,365	289,427	243,765	114,280	65,233	57,154	18,745	1,269,968
1967-68	605,368	277,439	241,580	99,068	69,986	58,692	19,423	1,371,557
1968-69	615,249	343,409	269,555	78,179	76,194	57,329	20,963	1,460,878
1969-70	638,927	331,034	291,701	89,004	58,481	37,289	25,873	1,472,309
1970-71	604,465	345,084	325,649	118,247	56,772	31,392	22,228	1,503,837
1971-72	685,807	409,369	356,253	82,643	60,944	28,574	23,017	1,646,607
Percentage								
1962-63	40.0%	23.0%	15.8%	8.6%	5.3%	5.3%	2.0%	100%
1964-65	38.4	24.4	15.7	8.0	6.0	6.1	1.4	100
1965-66	36.1	22.5	19.8	9.7	5.4	4.8	1.7	100
1966-67	37.9	22.8	19.2	9.0	5.1	4.5	1.5	100
1967-68	44.1	20.2	17.6	7.2	5.1	4.3	1.5	100
1968-69	42.1	23.5	18.5	5.4	5.2	3.9	1.4	100
1969-70	43.4	22.5	19.8	6.0	4.0	2.5	1.8	100
1970-71	40.2	22.9	21.6	7.9	3.8	2.1	1.5	100
1971-72	41.7	24.9	21.6	5.0	3.7	1.7	1.4	100

Source: Council for Financial Aid to Education, Voluntary Support of Education, 1971-72 (New York, 1973), p. 66.

*In every Survey, each institution is classified in the category appropriate to its status in that year. Since the status of many institutions has changed over the years, the data by category are not strictly comparable from one Survey to another.

Table 3-18: Voluntary Support for Reporting Institutions, by Purpose,
1964-65 through 1971-72

(In thousands)

Purpose	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	1970-71	1971-72
No. of Inst's.....	1,064	1,035	1,042	1,043	1,013	1,045	1,080	1,093
Unrestricted.....	\$407,970 (32.8%)	\$378,969 (30.8%)	\$380,770 (30.0%)	\$460,028 (33.5%)	\$424,570 (29.1%)	\$461,021 (31.3%)	\$481,056 (32.0%)	\$552,652 (33.6%)
Physical Plant.....	333,962 (26.8%)	311,906 (25.4%)	312,537 (24.6%)	319,358 (23.3%)	368,239 (25.2%)	323,534 (22.0%)	311,054 (21.0%)	322,576 (19.6%)
Basic Research.....	139,581 (11.2%)	176,710 (14.4%)	156,733 (12.4%)	171,736 (12.5%)	182,578 (12.5%)	177,494 (12.1%)	200,823 (13.3%)	210,565 (12.8%)
Student Financial Aid.....	143,912 (11.6%)	149,544 (12.2%)	174,025 (13.7%)	176,820 (12.9%)	171,737 (11.8%)	202,081 (13.7%)	205,156 (13.5%)	214,741 (13.0%)
Faculty Compensation.....	63,423 (5.1%)	75,709 (6.1%)	84,406 (6.6%)	75,241 (5.5%)	78,263 (5.3%)	78,191 (5.3%)	69,598 (4.6%)	80,993 (4.9%)
Other Purposes.....	155,967 (12.5%)	136,956 (11.1%)	161,498 (12.7%)	168,374 (12.3%)	235,441 (16.1%)	229,988 (15.6%)	236,150 (15.6%)	265,079 (16.1%)
Total.....	\$1,244,815 (100%)	\$1,229,794 (100%)	\$1,269,968 (100%)	\$1,371,557 (100%)	\$1,460,878 (100%)	\$1,472,309 (100%)	\$1,503,837 (100%)	\$1,646,607 (100%)
Current Expense.....	\$536,515 (43.1%)	\$603,424 (49.1%)	\$623,554 (49.1%)	\$685,912 (50.0%)	\$703,948 (48.2%)	\$786,460 (53.4%)	\$825,245 (55.3%)	\$877,687 (53.3%)
Capital Outlay.....	708,300 (56.9%)	626,370 (50.9%)	646,414 (50.9%)	685,645 (50.0%)	756,930 (51.8%)	685,849 (46.6%)	678,592 (44.7%)	768,970 (46.7%)

Source: Council for Financial Aid to Education, Voluntary Support of Education,
1971-72 (New York, 1973), p. 67.

2. Student Financial Aid

The 1,093 institutions surveyed by CFAE for 1971-72 reported nearly \$215 million, or 13 percent, of voluntary support they received was for student aid. This figure, however, did not include a substantial amount of private aid that goes directly to the students themselves. For example, 498 corporations surveyed by CFAE in 1970 reported an additional \$16 million in aid to students.²⁹

In sum, private philanthropy and endowment earnings remain an important source of funds for postsecondary education, especially for private institutions in the collegiate sector. Such philanthropy and earnings did not grow as rapidly as other sources of income over the past decade and, consequently, now provide a smaller share of total revenue to postsecondary institutions; but that trend is likely to be reversed as enrollments stabilize and gifts and endowment income continue to grow.

Income from Auxiliary Enterprises and Other Institutional Activities

Auxiliary enterprises and other institutional activities are the fifth major source of income for postsecondary educational institutions. This includes revenue from bookstores, intercollegiate athletics, departmental sales, patents and royalties, cafeteria and residence hall operations, and all other quasi-commercial activities of the institutions not included as income from students for educational services.

Auxiliary Enterprises

An auxiliary enterprise, according to one standard definition, is as follows:

An entity that exists to furnish a service to students, faculty or staff, and that charges at a rate directly related, but not necessarily equal, to the cost of service. The general public may be served incidentally by some auxiliary enterprises.³⁰

The principal auxiliary enterprises of collegiate institutions are food services, college unions, student stores, residence halls, and faculty housing. In addition, the term commonly includes inter-collegiate athletics, parking lots, vending services, and university presses.

In certain cases, auxiliary enterprises may operate with small annual profits or losses, but more often they are expected to break even (in the aggregate), except when current income is set aside for capital accumulation. The figures in Table 19 indicate the relationship between revenues and expenditures for auxiliary services as reported by the National Center for Education Statistics. All of this income from auxiliary services may be treated as restricted income similar to categorical support from other sources.

Table 3-19: Income and Expenditures for Auxiliary Enterprises of Collegiate Institutions, Fiscal Years 1968-69 through 1971-72

(In thousands)

Revenues/Expenditures	FY 1968-69	FY 1969-70	FY 1970-71	FY 1971-72
<u>Revenues</u>				
Housing.....	\$742,189	\$1,785,531*	\$1,910,775*	\$1,973,130*
Food Services.....	926,232			
Other Aux. Ent.....	<u>1,027,380</u>	<u>1,114,859</u>	<u>1,214,462</u>	<u>1,304,072</u>
Totals.....	\$2,695,801	\$2,900,390	\$3,125,238	\$3,277,502
<u>Expenditures</u>				
Housing.....	\$673,068	\$1,631,748*	\$1,764,006*	\$1,857,866
Food Services.....	848,049			
Other Aux. Ent.....	<u>1,023,114</u>	<u>1,137,528</u>	<u>1,224,401</u>	<u>1,327,273</u>
Totals.....	\$2,544,231	\$2,769,276	\$2,988,407	\$3,185,139

Source: U.S. Office of Education, HEGIS, *Financial Statistics of Institutions of Higher Education*.

*Housing and Food Services are combined after 1968-69.

Other Institutional Income

Institutions of postsecondary education, especially the large research universities, also derive income from patents, royalties, departmental sales and services, and various other sources. There are no data on the aggregate amount of income these sources bring to collegiate institutions.

Summary

When all five income sources are considered at once, the current pattern of support for postsecondary education begins to appear with greater clarity. Approximately 85 percent of the support from all sources in 1971-72 went to institutions (see Table 20). State and local governments were the principal contributors to institutional support, providing 36 percent of the total as compared with 17 percent from the federal government (primarily for research and work-force training), 23 percent from tuition and fee payments by students, 10 percent from gifts and endowments, and 14 percent from auxiliary enterprises and other earnings. Because of the federal government's heavy emphasis upon categorical aid, such aid from all sources amounted to 31 percent of total institutional aid; and general institutional support, which came primarily from state and local government, amounted to 62 percent.

Approximately 15 percent total of all support went to student financial aid, primarily grants, scholarships, Veterans' benefits, and Social Security payments. Here, the federal government was the major contributor, providing 88 percent of the total, largely in the form of Veterans' and Social Security benefits. The states remain relatively minor contributors of student financial aid, providing, despite rapid increases in state aid for students in recent years, only 7 percent of all such assistance.

Table 3-20: Estimated Total Financing for Postsecondary Education,
by Source and Major Financing Mechanism, 1971-72
(In millions)

Financing Category	Tuition & Fees	State & Local Support	Federal Support	Gifts & Endowment	Aux.Ent. & Other	All Sources	
						Amount	Percent
<u>Institutional Support</u>							
General institutional							
support.....	\$5,900	\$8,180	\$457	\$900	-	\$15,437	53%
Categorical aid (Current)...	-	350	2,978	1,050	3,500	7,878	27
Construction aid.....	-	500	442	550	-	1,492	5
Tax benefits.....	-	*	*	-	-	*	-
Other institutional aid....	-	-	308	-	-	308	-
Total institutional support	\$5,900	\$9,030	\$4,185	\$2,500	\$3,500	\$25,115	85%
Percent of total	23%	36%	17%	10%	14%	100%	
<u>Student Financial Aid</u>							
Grants and scholarships....							
Loans (subsidized).....	-	\$290	\$3,334	\$195	-	\$3,819	13%
Tax benefits.....	-	10	568	5	-	583	2
	-	*	*	-	-	*	-
Total student aid	-	\$300	\$3,902	\$200	-	\$4,402	15%
Percent of total	-	7%	88%	5%	-	100%	
Total financing	\$5,900	\$9,330	\$8,087	\$2,700	\$3,500	\$29,517	100%
Percent of total	20%	32%	27%	9%	12%	100%	

*No estimate available.

Conclusions

1. In fiscal year 1972, the income of postsecondary educational institutions was about \$30 billion. Of this \$30 billion:
 - 21 percent was received from students and parents;
 - 31 percent was received from state and local governments;
 - 27 percent was received from the federal government;
 - 9 percent was received from gifts and endowment income; and
 - 12 percent was received from auxiliary enterprises and other activities.
2. The level and character of financial support vary greatly from state to state and institution to institution, and these variations must be taken into account in developing effective national programs and policies.
3. In 1972, public financing for postsecondary educational expenditures at institutions amounted to \$17.2 billion. Of this amount \$4.2 billion, or 26 percent, was provided through students and \$13.0 billion, or 74 percent, was provided through institutions. An additional \$1.1 billion in public support was provided to students for living costs and education-related expenditures.

Recommendations

1. The Commission recommends that comparable financial information* for the entire postsecondary education enterprise be collected and reported in a timely and systematic fashion.
2. The Commission further recommends that financial information associated with institutions of postsecondary education be collected and reported in close cooperation with the states.

*Comparable information" has been defined in postsecondary education as meaning reported by institutions and by financing agencies using uniform definitions, formats, and procedures.

CHAPTER 4

ASSESSING THE ACHIEVEMENT
OF NATIONAL OBJECTIVES

ASSESSING THE ACHIEVEMENT OF NATIONAL OBJECTIVES

Postsecondary education in the United States is a large and complex enterprise, much of which has so far eluded detailed investigation. The enterprise does not yield easily to the sort of managerial and economic analysis that has been applied to other major activities and institutions. And yet there are few other areas in which such analysis is more needed as an aid to public policy formulation or more promising of useful knowledge. For this reason, this Commission has focused much of its energy and resources upon the development of an analytical approach to determining how and by whom and in what specific ways postsecondary education may be most effectively provided the financial resources needed to achieve its principal objectives.

In the preceding chapters, the Commission has defined what it means by postsecondary education, discussed a number of social and institutional changes during the past two decades that may be of special significance to postsecondary education, described in some detail the flow of funds to students and institutions, and identified from a national perspective a series of general objectives for postsecondary education.

In this chapter, the criteria listed in Chapter 2 are applied, where possible, to the current postsecondary educational system to attempt to determine how well postsecondary education is achieving the objectives identified by the Commission and to what extent existing financing patterns contribute to the achievement of those objectives.

It must also be acknowledged that for several of the listed objectives there appear to be few, if any, quantifiable measures that are useful and for which there are now data available. Where this is the case, an effort has been made to identify one or more subjective measures that may be helpful, but the analysis remains quite limited in several important areas. Thus, there are obvious shortcomings to currently identified measures. The Commission is convinced, however, that, as this approach is further developed and a stronger data base is constructed, the analysis will provide policy makers and administrators with a set of tools that will be of considerable value in the future.

Student Access to Postsecondary Education

The Commission has defined the objective of student access to mean that each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability, and motivation. Access must not be denied on the basis of income, sex, race, ethnic group, residence, or other personal characteristics.

Nearly 30 percent of total local, state, and federal expenditures for postsecondary education are directed at the problem of access. These include Talent Search, Upward Bound, Basic Educational Opportunity Grants, College Work-Study, and National Direct Student Loans, which are intended for low- and middle-income students; and Social Security and Veterans' benefits, which though not directed specifically at low-income students, nevertheless have a major impact on access. A substantial amount of state student aid is also intended to improve access (as well as choice). In addition, it can be argued that the portion of state appropriations for institutional support that enables public institutions to charge a rate of tuition that is less than

the average charge for comparable private institutions is also intended to improve access. In all, then, perhaps as much as half of total public support for postsecondary education is primarily intended to improve access.

One method of measuring access is to compare the distribution of students by income, race, and the other characteristics with the distribution of the college-age population according to those same characteristics. To the extent that low-income students, for example, are underrepresented in the student population, there is reason to believe that the objective of equal access is not being achieved. It may be argued, of course, that persons in one or more of these groups are willingly underrepresented in certain segments of the student population (for example, students from high-income families in public two-year colleges), but the burden of proof in such cases ordinarily must rest with those who take that position.

Unfortunately, reasonably good data with respect to access are available only on family income, race, sex, and residence. Thus the following analysis remains somewhat limited.

1. Family Income

The figures in Table 1 compare the family income of households that have one or more dependent children aged 18 to 24 or a head of household in that age group, with the family income distribution reported for individuals enrolled in postsecondary institutions. It is evident that persons from families with incomes below \$10,000 are significantly underrepresented, and especially those from families with incomes under \$3,000 and from \$6,000 to \$7,499. A total of 55.6 percent of the 18 to 24 year-old population has family income of less than \$10,000, while only 36.8 percent of those enrolled in postsecondary institutions are in this category. For noncollegiate institutions, there is also substantial underrepresentation at income levels below \$3,000 and between \$6,000 and \$7,499.

Table 4-1: Percentage Distribution of 18-24 Year Old Population and Postsecondary Undergraduate Enrollment, by Income, 1972-73.

Income Group	18-24 Age Group	Collegiate Undergraduates	Non- collegiate
Under \$3,000.....	8.6%	4.1%	5.6%
\$3,000 to \$5,999....	14.4	12.1	15.0
\$6,000 to \$7,499....	16.7	6.9	9.4
\$7,500 to \$9,999....	15.9	13.0	15.8
\$10,000 to \$14,999..	25.2	29.4	30.3
\$15,000 to \$24,999..	12.7	23.4	18.7
\$25,000 and above...	6.5	11.1	5.2
Total...	100.0%	100.0%	100.0%

Source: U.S. Bureau of the Census, *Current Population Survey* (October 1972), special tabulations.

Table 2 presents another breakdown of this data, in this case taking into account the number of students who are not enrolled but who nevertheless have had some college. From these figures, it appears that the percentage of students in each income group who are not enrolled but have had some college increases with income, so that the percentage not enrolled and with no college experience drops more quickly with rising income. Thus, the income disparities are even greater than suggested in Table 1.

Access has been improved in the past several years as a result of institutional and public policy initiatives. The Commission estimates that because of the broad variety of financial aid programs available, 1.4 million students—who otherwise would not have attended—have enrolled. (See Appendix B.) Evidence of the improved participation rates of individuals from families with less than \$3,000 annual income has been presented in Chapter 1. In addition, Table 1 indicates

Table 4-2: Family Income of 18-24 Year Old Population, Enrolled and Not Enrolled in the Collegiate Sector, Fall 1972

Income Level	Total	Individuals (Thousands)			Percent of Income Level			Percent of Totals	
		Enrolled in College	W/Some College	Not Enrolled W/No College	Enrolled	Total	Not Enrolled W/No College	Enrolled	Not Enrolled W/No College
Under \$3,000	1,677	239	145	1,253	14.3%	85.7%	77.1%	4.6%	11.2%
\$3,000-\$4,999	2,441	395	253	1,793	16.2	83.8	73.5	7.6	15.6
\$5,000-\$7,499	3,689	577	494	2,618	16.6	84.3	71.0	11.1	22.7
\$7,500-\$9,999	3,171	615	556	2,000	19.4	80.6	63.1	11.9	17.4
\$10,000-\$14,999	4,987	1,470	901	2,616	29.5	70.5	52.5	28.3	22.7
\$15,000 and over	3,857	1,891	761	1,205	49.0	51.0	31.2	36.5	10.5
Totals	19,822	5,187	3,110	11,525	26.2%	73.8%	58.1%	100.0%	100.0%

Source: U.S. Bureau of the Census, Current Population Survey (October 1972), special tabulations.

Note: Excludes those not reporting family income.

that those in the 18-24 year old population, with incomes between \$3,000 and \$6,000, represent a percentage of total postsecondary education enrollment which closely approximates their percentage of the total age bracket. Table 2A illustrates the total financial aid received by students by income level and indicates that these promising developments result largely from the fact that student aid is focused primarily on these low-income groups.

Nevertheless, when family income is used as an indicator of access, the result is clear: the participation rate for 18-24 year olds whose family income is \$10,000 or more is twice the rate of those from families with annual incomes of less than \$10,000. The total number of students from families with incomes under \$10,000 would have to increase 50 percent beyond the 1972 level to reach the same participation rate as the entire traditional college-age population.

Among public institutions, comprehensive colleges appear to do substantially better, with respect to income-related access, than all other institutions except two-year colleges, which are a close second (see figures in Table 3); among private collegiate institutions, two-year colleges and the smaller doctorate-granting institutions appear to be most accessible in terms of income. In four of the five institutional categories shown in Table 3, public institutions are more accessible than private, with the exception of liberal arts institutions. More detailed data for these institutional categories (see Appendix B) suggest that the heavy concentration of student aid for students in liberal arts colleges may account for this exception.

Table 3a reveals the distribution of enrollment by type of institution within major income categories. The pattern generally reflects the relative number of places available in the public and private sectors but dramatizes the particularly significant role of public institutions in educating students from the income categories ranging from \$3,000 to \$9,999. The special effort made by private research and doctorate granting institutions in providing places for students from the lowest income category can also be observed.

More than twice as many men and women with family incomes of \$12,000 and above complete two to four years of college compared to

Table 4-2A: Federal Programs of Student Aid*, Fiscal 1972

Type of Student Aid by Income Groups	Research Univ.		Ph.D. Granting		Comprehensive		Liberal Arts	
	Public	Private	Public	Private	Public	Private	Public	Private
<u>Education Opportunity Grants</u>								
less than \$3,000	22.5%	20.8%	22.2%	20.1%	32.3%	23.2%	27.2%	27.0%
\$3,000-\$5,999	44.3	41.6	43.5	38.2	43.6	40.0	42.2	40.6
\$6,000-\$7,499	18.2	21.0	19.8	21.9	14.6	19.6	18.8	17.3
\$7,500-\$8,999	12.4	14.2	11.3	16.8	8.1	14.0	9.4	12.6
\$9,000-\$11,999	2.4	2.2	3.0	2.4	1.3	2.9	2.3	2.3
\$12,000 and over	0.2	0.2	0.2	0.6	0.1	0.3	0.1	0.2
<u>College Work Study</u>								
less than \$3,000	16.2%	9.6%	14.7%	12.1%	23.2%	14.6%	18.6%	18.3%
\$3,000-\$5,999	27.6	19.1	26.6	20.5	32.7	24.8	26.4	27.5
\$6,000-\$7,499	17.8	15.0	16.9	15.5	15.7	16.1	17.4	14.8
\$7,500-\$8,999	15.1	14.8	13.7	15.2	11.8	14.8	15.5	13.2
\$9,000-\$11,999	16.3	20.2	15.5	21.8	12.2	19.0	15.1	16.1
\$12,000 and over	7.0	21.3	12.6	14.9	4.4	10.7	7.0	10.1
<u>Direct Loans</u>								
less than \$3,000	14.1%	7.5%	12.4%	8.7%	20.8%	10.4%	15.7%	13.2%
\$3,000-\$5,999	22.3	12.8	23.2	17.0	29.4	17.5	26.8	20.8
\$6,000-\$7,499	13.9	9.6	15.6	11.9	15.0	12.1	16.1	12.4
\$7,500-\$8,999	13.8	10.8	14.6	13.3	12.8	13.4	15.1	12.3
\$9,000-\$11,999	21.3	21.2	20.6	23.4	15.1	22.6	16.5	19.6
\$12,000 and over	14.6	38.1	13.6	25.7	6.9	24.0	9.8	21.7
<u>Undergraduate Enrollment, 1972 (Primary family members)</u>								
less than \$3,000	1.9%	1.8%	4.7%	10.6%	4.9%	3.4%	**	3.2%
\$3,000-\$5,999	11.1	5.6	15.0	5.8	13.4	9.0	**	11.3
\$6,000-\$7,499	4.4	4.3	3.6	6.7	8.0	4.7	**	5.9
\$7,500-\$8,999	7.8	5.7	7.7	7.1	12.5	9.9	**	7.0
\$9,000-\$11,999	14.7	13.8	16.6	16.8	16.7	16.1	**	14.8
\$12,000 and over	60.1	68.8	52.4	53.0	44.5	56.9	**	57.8

Source: U.S. Office of Education, special tabulations; Current Population Survey, October 1972.

*This table is read as follows: Of the students who receive Education Opportunity Grants and attend public research institutions, 22.5 percent come from families that earn less than \$3,000.

**Not calculated because of small sample size.

Table 4-3: Percentage Distribution of Undergraduate Students by Family Income, Collegiate Sector, by Major Carnegie Classification, 1972

Institutional Type/Income Level	Public Inst's	Private Inst's
Research Universities:		
Under \$10,000.....	28.0%	19.8%
\$10,000 and above.....	72.0	80.2
Other Doctorate Granting Inst's:		
Under \$10,000.....	33.9%	32.7%
\$10,000 and above.....	66.1	67.3
Comprehensive Colleges:		
Under \$10,000.....	42.8%	30.5%
\$10,000 and above.....	57.2	69.5
Liberal Arts Colleges:		
Under \$10,000.....	25.0%	29.9%
\$10,000 and above.....	75.0	70.1
Two-Year Colleges:		
Under \$10,000.....	39.9%	33.4%
\$10,000 and above.....	60.1	66.6

Source: U.S. Bureau of the Census, *Current Population Survey* (October 1972), special tabulations.

those with family incomes below \$12,000 (Table 4). Both the high rate of drop out at the high school level and termination of formal schooling upon graduation seem to account for a large part of this disparity.

Evidence of the difficulties involved in solving the inequities of access, however, is provided in further analysis of the Project TALENT data. For the problem is clearly not related to family alone. Another consideration, indeed the factor with the strongest statistical relationship to college-going, is the high school curriculum followed by the student. If a student has followed a college preparatory program, his or her chances of going on to a collegiate institution range from 70 to 85 percent.

Yet another factor, parental educational attainment, indicates that the greater the educational attainment of a student's father, the greater the likelihood that the student will enroll in postsecondary

Table 4-3a: Percentage Distribution of Enrollment by Institutional Type and Control, 1972*

Institutional Type	Family Income Ranges						
	Under \$3,000	\$3,000-\$5,000	\$5,000-\$7,499	\$7,500-\$9,999	\$10,000-\$14,000	\$15,000-\$24,999	\$25,000 and over
<u>Collegiate Institutions:</u>							
Research and Doctorate Granting Universities							
Public	11.8%	19.7%	12.7%	17.1%	17.8%	21.8%	24.5%
Private	7.9	3.6	4.3	4.5	5.9	6.5	13.3
Comprehensive Colleges							
Public	31.5	28.1	29.7	31.7	25.1	25.0	18.0
Private	4.3	4.9	4.8	6.4	6.0	6.9	6.1
Liberal Arts Colleges							
Public	0.8	0.2	0.2	0.1	0.5	0.0	0.5
Private	6.7	8.1	7.0	6.2	7.7	9.0	13.2
Two-Year Colleges							
Public	27.9	27.9	31.1	26.2	27.0	21.0	15.6
Private	1.6	0.4	1.6	1.1	1.3	1.0	1.6
Other Institutions							
Public	2.4	5.3	5.9	4.8	6.3	6.9	4.9
Private	5.1	1.8	2.7	2.4	2.3	1.9	2.3
<u>All Collegiate Institutions</u>							
Public	74.4%	81.2%	79.6%	79.4%	76.7%	74.7%	63.5%
Private	25.6	18.8	20.4	20.6	23.3	25.3	36.5
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
<u>Noncollegiate Institutions</u>							
Public	69.5%	59.2%	62.7%	54.4%	51.4%	49.3%	46.2%
Private	30.5	40.8	37.3	45.6	49.6	51.7	53.8
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

*Excludes those not reporting income.

Table 4-4: Percentage Distribution for Highest Educational Attainment by Family Income, Men and Women, 1970

Family Income	High School Dropout	High School Graduate	Less than 2 Yrs. of Coll.	2-4 Yrs. of Coll.	Total
<u>Men</u>					
Less than \$6,000	14%	43%	19%	24%	100%
\$6,000-\$8,999	11	34	18	37	100
\$9,000-\$11,999	13	28	22	38	100
\$12,000 and above	8	23	13	55	100
<u>Women</u>					
Less than \$6,000	13%	54%	13%	20%	100%
\$6,000-\$8,999	6	44	15	36	100
\$9,000-\$11,999	11	34	18	37	100
\$12,000 and above	7	28	20	45	100

Source: Project TALENT, special tabulation.

education (see Appendix B). In like fashion, students whose fathers are in professional, technical, and related occupational categories participate in college at a higher rate than students whose fathers are employed in other occupational categories.

2. Race and Ethnic Group

The most recent reliable figures on the distribution of students by race are shown in Table 5.

Nonwhite students are less likely to be enrolled in public research universities than whites, but more likely to be enrolled in public comprehensive colleges. Nonwhite students are also less likely to be enrolled in private doctorate-granting institutions (other than research universities) and much less likely to be enrolled in various private specialized institutions. However, they are more likely to be enrolled in private liberal arts colleges than whites.

Table 4-5: Distribution of White and Nonwhite Enrollment,
by Institutional Type, 1972*

Institutional Type	Number (Thousands)				Percentage			
	Public		Private		Public		Private	
	Nonwhite	White	Nonwhite	White	Nonwhite	White	Nonwhite	White
Research Univ.....	58	954	33	346	10.7%	17.5%	20.8%	18.4%
Doctorate Granting Inst's..	48	478	11	187	8.8	8.7	6.9	9.9
Comprehensive Colleges.....	217	1,821	32	453	40.0	33.3	20.1	24.1
Liberal Arts Colleges.....	1	28	68	04	-	0.1	42.8	32.1
Two-Year Colleges.....	181	1,733	6	80	33.3	31.7	3.8	4.3
Specialized Inst's.....	11	52	5	202	2.0	0.1	3.1	10.7
Other Inst's.....	27	399	4	9	5.0	7.3	2.5	-
All Institutions.....	543	5,465	159	1,881	100.0%	100.0%	100.0%	100.0%

Source: U.S. Bureau of the Census, *Current Population Survey*
(October 1972), special tabulations.

*White enrollment includes Mexican-Americans.

Data from Project TALENT on race and ethnic group are shown in Table 6. As indicated, 76 percent of black men and 70 percent of black women in the TALENT survey either dropped out of high school or completed their education upon graduation from high school, and only 25 percent of the men and 30 percent of the women went on to college. Among whites and other Caucasians (which includes Mexican-Americans), 40 percent of the women and 53 percent of the men went on to college.

Table 7 shows participation rates for persons 18 to 24 years of age by ethnic group as well as race in 1970. According to these figures, American Indians and persons of Mexican parentage or birth have the lowest participation rates of any ethnic group. Over 80 percent of persons in these groups who were between 18 and 24 were not enrolled and had not had any collegiate education. The figures for blacks were approximately

Table 4-6: Percentage Distribution for Highest Educational Attainment by Race and Ethnic Group, Men and Women, 1972

Race/Ethnic Group	High School Dropout	High School Graduate	Less than 2 Yrs. of Coll.	2-4 Yrs. of Coll.	Total
<u>Men</u>					
Black	27%	49%	9%	16%	100%
Oriental	1	42	17	41	100
White/Caucasian	10	37	20	33	100
American Indian	20	63	7	10	100
<u>Women</u>					
Black	21%	49%	11%	19%	100%
Oriental	0	37	29	34	100
White/Caucasian	13	48	14	26	100
American Indian	24	71	1	4	100

Source: Project TALENT, special tabulation.

Table 4-7: Participation Rates for Persons 18-24 Years Old, by Race and Ethnic Group, 1970

Race and Ethnic Group	Individuals (In thousands)			Percent of Corresponding Group		
	Total	Enrolled in College	Not Enrolled With Some College	Enrolled in College	Not Enrolled With Some College	With No College
Mexican parentage	172	22	12	12.7%	6.9%	80.5%
Mexican birth	84	6	4	7.0	4.4	88.6
Negro	2,633	329	194	12.5	7.4	80.2
Indian	96	11	7	11.1	7.8	81.1
Japanese	65	30	13	45.7	20.5	33.9
Chinese	66	36	7	57.9	11.3	30.8
Other Nonwhites	104	23	16	21.9	15.5	62.5
All Others	20,145	5,067	2,991	25.2	14.8	70.0
All Groups	23,365	5,526	3,244	23.6%	13.9%	62.5%

Source: U.S. Bureau of Census, 1970 Census of the Population.

the same, while persons of Japanese and Chinese descent were found to have extraordinarily high participation rates.

What all these findings suggest is that income, parental education and occupation, and racial and ethnic characteristics tend to be interrelated factors which, in large measure, determine the high school curriculum a student will follow, and, hence, largely determine his or her postsecondary education options. Indeed, these factors may combine to reinforce each other from one generation to the next.

Public policies designed to improve access must address not only student and family financial constraints, but also the perceptions about opportunities beyond high school which students and families form early in the student's secondary school years, and perhaps before those years.

3. Sex

Our colleges and universities have come some distance since 1870 when, during the debate about whether the University of Michigan should admit women, it could be openly argued that the admission of women would be "a very dangerous experiment... certain to be ruinous to the young ladies who should avail themselves of it...and disastrous to the institution."¹ Yet the fact remains that as of 1973, women, who constitute 51 percent of the 18-24 year group, make up only 44 percent of undergraduate enrollment and 39 percent of graduate enrollment. When undergraduate and graduate enrollment are combined, women make up 41 percent (see Table 8).

Table 4-8: Opening Fall Enrollment for Degree Credit in Collegiate Institutions, by Sex, 1950, 1955, 1960, 1965, 1970

Year	Numbers		Percentage	
	Men	Women	Men	Women
1950.....	1,569,322	727,270	68%	32%
1955.....	1,747,429	931,194	65	35
1960.....	2,270,640	1,339,367	63	37
1965.....	3,396,574	2,173,697	61	39
1970.....	4,636,641	3,283,508	59	41

Source: U.S. Office of Education, *Opening Fall Enrollment in Higher Education*, 1965, 1968, 1970.

In 1972, 39 percent of female high school graduates went on to college as compared with 53 percent of all male high school graduates. Not surprisingly, women who do go on to college rank well above men, on the average, in high school achievement and in admissions tests.² The disparity is even greater at the graduate level where women again score higher than men on admissions tests but in 1971-72 constituted, for example, only 7.7 percent of law school enrollment and 10 percent of medical school enrollment.

There are, of course, many reasons for the underrepresentation of women. Perhaps the most significant has been the use of quota systems by coeducational institutions, public as well as private, to maintain male majorities.³ Such quotas are clearly discriminatory (based as they are on the belief that men are in greater need of college training for future employment than women). Presumably quotas will become relics of the past for all institutions that receive public assistance (and that have no tradition of serving but one sex) when the Guidelines for Title IX of the Education Amendments of 1972 are issued.

There is also evidence that women are discouraged from going on to college by high school counselors, that they face difficulties in competing with men for part time earnings (as a consequence of which they must rely more on family aid), and that they are subjected to sex discrimination in the distribution of student financial aid.⁴ According to a 1972 Educational Testing Service study, women averaged \$215 per year less than men in financial aid despite an equal financial need.⁵ Women, of course, are virtually excluded from some aid—notably most athletic scholarships and Veterans' benefits. Women also face substantial discrimination at the graduate level where, largely because they are discouraged in many ways from going on for further study, they receive only about 20 percent of the available fellowships. According to U.S. Office of Education statistics, 37 percent of female graduate students receive stipends of some kind as compared with 49 percent of male students.⁶

4. Residence

A recent study sponsored by the College Entrance Examination Board defined "free-access higher-education" to include three characteristics: low cost, admission of "the majority" of high school graduates, and an absence of geographical and psychological barriers.⁷ The study then went on to plot the availability of institutions that met the definition and found that nearly three-fifths of the population does not live near (within 45 minutes, one-way) a "free-access" college (see Table 9). In general, as might be expected, those who live in sparsely populated areas are the least well served. The best served, it appears, are those in small metropolitan areas, while those in the largest metropolitan areas are only somewhat better served than those in rural areas.

Table 4-9: Percentage of Different Populations Within
Commuting Distance of A Free-Access College
in the 50 States¹

Population Centers	Population (Millions)	White	Black	Mexican- American ²	All U.S.
Metropolitan Areas (SMSA) ³					
1,000,000+					
Central cities.....	32.6	36%	42%	42%	38%
Fringe.....	33.2	37	31	68	37
500,000-1,000,000.....	20.0	36	46	66	38
250,000-500,000.....	16.0	47	61	37	48
50,000-250,000.....	16.2	62	70	56	63
Counties not in SMSA's					
Over 20,000.....	45.0	48%	52%	42%	48%
Under 20,000.....	16.2	24	27	13	24
All United States.....	179.3	42%	47%	47%	42%

Source: Warren Willingham, *Free-Access Higher Education*, p. 12.

¹Forty-five minutes, one-way.

²Mexican-American in five Southwestern states; also includes Puerto Ricans in New York City and Chicago.

³Standard Metropolitan Statistical Area.

On a regional basis, the study found that on the average persons living in the South and West are best served, while persons living in the Midwest are the least well served. (See Table 10). Of all the moderately large metropolitan areas in the country with no "free-access" colleges, more than half were found to be located in the Midwest.

Obviously, the present system of financing, which depends to a great degree on the willingness of the citizens of each state and locality to establish and support public institutions, does not result in an even distribution of access to collegiate institutions by the CEEB measure.

Table 4-10: Percentage of the Population Within Commuting Distance of A Free-Access College, by Different Types of Communities, by Region.

Population Centers	Northeast	Midwest	South	West
Metropolitan Areas (SMSA)				
1,000,000+				
Central cities.....	29%	44%	38%	44%
Fringe	27	30	38	62
500,000-1,000,000.....	36	12	53	55
250,000-500,000.....	49	39	53	48
50,000-250,000.....	71	47	71	61
Counties not in SMSA's				
Over 20,000	51%	35%	55%	50%
Under 20,000.....	24	23	28	17
Overall percentage for each region.....	38%	33%	50%	51%

Source: Warren Willingham, *Free-Access Higher Education*, p. 15.

The Commission concludes this discussion of access by noting that of all the objectives, and in particular, of all the student-related objectives, access is perhaps the most fundamental. For without access to postsecondary education, the other objectives, including adequate choice and opportunity, are reduced to empty promises.

That student access in postsecondary education is inequitable is, therefore, particularly troubling. For without access, neither choice nor student opportunity can be realized. Indeed, the question of whether or not the postsecondary education enterprise can meet its other objectives, including public accountability, in the absence of real access, is an open one.

Moreover, for students and parents, the very perception of barriers to access today may work out as a barrier to access in the future.

Student Choice

Student choice, as it has been defined by this Commission, means that each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her for admission. Access, in other words, must not be denied by a lack of real choice on the part of students to attend the institutions for which they are qualified for admission. Obviously, every student ought not to be given a blank check to go anywhere, but the promise of access must be made real by assurance of reasonable choice.

All state, federal, and private (including institutional) student financial aid that is based largely or entirely on need

contributes to the achievement of choice. At least \$200 million in state aid, perhaps \$500 million in federal student aid, and approximately \$150 million in private institutional funds directly serve this purpose. Choice, as defined by the Commission, is enhanced by state support for private institutions to the extent that such support enables those institutions to charge lower rates of tuition than they would otherwise.

Choice is not easily measured, however. Some of the barriers to access, such as cost, distance, and racial and ethnic discrimination, are also barriers to choice.

One measure of choice as it relates to cost is the extent to which the distribution of students by family income is affected by the level of tuition and other fees charged by various types of institutions. Table 11 shows the average student charges for seven major institutional categories and the percentage of enrollment in each category from families reporting incomes of less than \$10,000. The average prices range from \$236 to \$2,465 per year, and the percentage of low-income enrollment ranges from 19.8 to 42.8 percent. Thus, a price ratio of about 1 to 10 accommodates an enrollment ratio of about 1 to 2. By this income measure, choice is currently more available than access across all ranges of postsecondary educational institutions.

Another measure is the actual distribution of students by race, ethnic origin, and sex. These last measures of choice were discussed under the objective of access in the previous section.

Table 4-11: Tuition and Participation Rates of Low-Income Students, by Type of Institution, 1971-72

Institutional Type	Average Tuition and Other Fees ¹	Percentage of Enrollment from Families with Incomes below \$10,000	
		Undergrad.	Graduate
Research Universities:			
Public.....	\$683	28.0%	31.0%
Private.....	2,465	19.8	23.2
Other Ph.D. Granting Inst's:			
Public.....	\$563	33.9%	26.0%
Private.....	1,793	30.5	31.8
Comprehensive Colleges:			
Public.....	\$431	42.8%	26.6%
Private.....	1,752	29.9	17.4
Liberal Arts Colleges:			
Public.....	\$408	25.0%	*
Private.....	1,660	32.7	27.3
Two-Year Colleges:			
Public.....	\$236	39.9%	24.7% ²
Private.....	1,157	33.4	*
Proprietary Schools: ³			
Trade and Technical..	\$1,620	-	-
Others.....	1,017	-	-

Source: U.S. Office of Education, HEGIS, *Financial Statistics of Institutions of Higher Education* (1971-72); National Commission on the Financing of Postsecondary (NCFPE) Survey of Noncollegiate Institutions; U.S. Bureau of the Census, *Current Population Survey* (October 1972), special tabulations.

¹ Before student aid.

² Students with advanced degrees who are enrolled in two-year college courses.

³ Estimated nine-month equivalents.

On the whole, then, undergraduates can choose among all institutions except the most expensive, given that students are admitted and elect to attend any form of postsecondary education. The Commission notes, however, in light of the large numbers of low-income students not seeking postsecondary education, that choice could be maintained if low-income students achieved access in proportion to their numbers in the general population. Increased financing would be required to achieve additional access and choice.

Student Opportunity

Once enrolled in an institution of postsecondary education, a student should be assured full opportunity to achieve his or her educational objectives. Student opportunity means that necessary academic assistance, counseling, and other supportive services should be made available to those who require them. It is only when opportunity for achievement is assured that the objectives of access and choice have real meaning. Although equal opportunity certainly does not mean that all individuals will or should attain the same level of achievement, it does mean that the enrolling institutions must help students to realize their full potential.

Financial support that contributes directly to the achievement of student opportunity is less easily identified than that which contributes to access and choice. To the extent that financial aid is available to students beyond the freshman undergraduate year and for more than one year of graduate study, that aid, of course, contributes to opportunity. In addition, opportunity is enhanced by public and private support for institutional services, such as counseling and special academic assistance, that help students overcome educational and other problems that might otherwise compel them to drop out of college before completing their objectives.

It is, of course, extremely difficult to quantify an individual's educational objectives and his or her potential for achievement. The potential for achievement may be measured by past academic performance and by various forms of aptitude tests. Both methods are widely employed by collegiate institutions as part of the admission process. But these measures, and especially past achievement, have been found in many cases to be greatly influenced by the same extraneous factors that educational institutions in our society are expected to help individuals overcome. Educational objectives are similarly conditioned by factors that are often unrelated to real ability. It is generally agreed that postsecondary education has a responsibility not only to enhance an individual's opportunities for success in the student's own terms but also to broaden his or her aspirations.

Nevertheless, some rough and limited measures of opportunity may be constructed. One measure would be the relationship of aptitude, as indicated by standard tests, to the level of educational attainment. Another measure would be the rate of completion of academic and occupational programs by the students enrolled in such programs. Students can and do drop out of programs or transfer to others for perfectly valid reasons of their own (including obtaining employment in their field of interest), so that completion rates, if given too much weight, can be misleading. Yet, to the extent that program objectives are consonant with student objectives, program completion rates give some evidence of the degree to which equality of opportunity is assured.

Table 12 shows the college completion rates after four years for a sample of students who entered college in the fall of 1967. These figures indicate that there are significant disparities in

the completion rates for students who entered four-year colleges and universities and those who attended two-year colleges. (Of course, part of this finding is explained by the fact that two-year colleges serve many who are not interested in completing a degree or certificate program but simply want sufficient training to obtain a job.) In addition, men who attended four-year institutions were somewhat more likely to have received a degree or be still enrolled than women, although the opposite was true for students who attended two-year colleges. Except for these few differences, there may be little difference in opportunity on the basis of race and sex.

The data in Table 13 represent an effort to measure the importance of family income and institutional price on completion rates. The drop-out rates for selected income levels are compared for the major categories of collegiate institutions (see Appendix B for the complete table). There appears to be little difference in dropout rates at the lowest income level among types of institutions, despite substantial differences in tuition charges. As the income level rises, however, the dropout rate falls, indicating some relationship between opportunity and income. More noticeable is the increasing difference in dropout rates between public and private institutions at the higher income levels. Private institutions, despite their higher charges, have higher completion rates than public institutions. It is also true, however, that public institutions are required to be more responsive to a broader range of students and student interests, and this may explain their lower completion rates.

Institutional Diversity

Diversity, in the minds of many, is a primary characteristic of postsecondary education in this country. Diversity is

Table 4-12: Completion Rates for a Selected Sample of the Class of 1970, Four Years After Entering College

Sample Group	Returned for 2nd Yr.	Received a Degree*	Recd. Degree or Still Enrolled
Two-Year Colleges:			
Men.....	67.0%	36.6%	38.9%
Women.....	64.5	41.2	42.8
Blacks.....	62.3	29.4	30.6
Nonblacks.....	66.2	39.0	41.1
All students.....	66.0	38.4	40.5
Four-Year Colleges & Univ:			
Men.....	78.7%	45.2%	60.7%
Women.....	77.1	48.6	55.6
Blacks.....	75.8	42.1	56.2
Nonblacks.....	78.1	47.0	58.6
All students.....	78.0	46.0	58.5

Source: American Council on Education, 1967 Freshman Survey

*Associate or bachelor's degree.

Table 4-13: Percentage of Dropout,* Class of 1970, by Selected Income Levels and Institutional Type

Institutional Type	Income Level			
	Under \$4,000	\$10,000- \$14,999	\$20,000- \$24,999	All Levels
Public Institutions:				
Universities.....	20.8%	25.2%	16.6%	25.4%
Other four-year...	24.2	22.9	20.4	23.3
Two-year.....	26.2	30.9	36.0	30.3
Private Institutions:				
Universities.....	21.2%	15.8%	13.4%	14.8%
Other four-year...	23.1	16.5	14.7	17.5
Two-year.....	24.5	27.9	16.9	23.6
All Institutions.....	23.9%	24.0%	18.9%	23.9%

*Dropout is defined as a student who is out of school, temporarily or permanently, without having obtained an associate or bachelor's degree.

essential to meeting the educational needs of our pluralistic society in which the individual is believed to be the best judge of his or her own interests. The Commission has defined the term very generally to mean that postsecondary education should offer instructional programs and opportunities and engage in research and public service that are sufficiently diverse to be responsive to the changing needs of individuals and society.

All state and local appropriations for the support of public and private postsecondary educational institutions may be said to contribute to diversity as do federal grants for research and public service, state expenditures for capital outlay, federal in-kind grants, tax benefits, and private gifts and grants. Several states have set aside funds for innovation and experimentation in programs and institutional methods, as have the federal government. In addition, the federal government has contributed substantially to diversity through its Aid to Developing Institutions. A total of \$210 million has been obligated for this program since 1966 and it has gone to nearly one-third of the nation's institutions of higher education. Diversity is to a large extent, however, the responsibility of those who spend institutional support rather than those who provide the necessary monies, except when those monies are earmarked for special purposes.

Many who have studied existing institutions have concluded, however, that real diversity of purpose and program is little in evidence in the collegiate sector.⁸ If diversity was once an important characteristic of these institutions, they say, it is no longer. If true, this would appear to be a very serious charge, given the significance many attach to this quality. Thus, it is important to attempt to determine how much diversity does in fact exist and to what extent current financing patterns contribute to its growth or erosion.

Diversity, as defined by the Commission, is quite clearly not simply a function of the number of institutions, although the fact that there are several thousand collegiate institutions and an even larger number of noncollegiate institutions is undoubtedly important. Nor is diversity simply a consequence of the fact that there are at least 50 separate state "systems" in the collegiate sector, although that, too, is of considerable importance. To obtain some real measure of diversity, a number of factors must be examined, including institutional purposes, curricular offerings, institutional size and administration, operational flexibility, and responsiveness to known student needs.

1. Diversity of Purpose

The differences among postsecondary institutions in their purposes or missions may not be easily observed from a distance. Yet it is a widely held belief, buttressed by the findings of several earlier national studies, that there has been an important trend toward homogeneity of purpose among collegiate institutions over the last few decades.⁹ Technically-oriented two-year colleges and four-year universities have added extensive liberal arts programs to their curricula. Agricultural and engineering colleges have transformed themselves into comprehensive colleges and universities, as have many liberal arts colleges. Comprehensive colleges have sought to become universities with graduate divisions of some consequence and as much research activity as the faculty and administrators can attract. Some writers have laid much of the blame for these developments on the fact that university-trained faculty and administrators seek to recreate the conditions in which they were trained and which they were taught to value. It also seems evident, however, that federal financing has had a major impact on institutional development in that it has emphasized research and graduate training and that

this emphasis has encouraged colleges and universities to seek to emulate the large research universities.¹⁰

In any case, relatively few institutions in the collegiate sector have been successful in defining their purposes in a way that offers prospective students clear choices about the type of education they will pursue. On the contrary, most collegiate institutions have sought to blur such distinctions. Only a few new experimental colleges have joined the handful of institutions that have traditionally stood apart; and as the competition for students increases, it is possible that even fewer colleges and universities will want to risk being different.

Interest in academic innovation and "reform," an outgrowth of the campus turmoil of the 1960s, has produced some significant experimentation, to be sure. According to the Carnegie Commission's report, *An Inventory of Academic Innovation and Reform*, over the past four years 35 new and innovative institutions have been opened, 30 cluster colleges have been established, 60 institutions have agreed to participate in external degree programs, and some 300 "free" universities have been started.¹¹ Yet, apart from the external degree programs, which are still in the formative stages in most areas, and the "free" universities, many of which have withered away after only a year or so, the actual volume of experimental programs has been small relative to the size of the total enterprise. Unfortunately, little has been reported about new developments in the non-collegiate sector.

2. Program Offerings

On the other hand, a tabulation of the variety of offerings of collegiate and noncollegiate institutions indicates that students have a rather wide range of choices *within* many institutions, particularly the larger ones, and there is evidence to show that this diversity of choice has grown considerably during the past two decades.¹²

Table 14 shows the number of program areas offered by collegiate institutions in 1970-71. For this purpose, the entire spectrum of major fields, disciplines, and degree concentrations was consolidated into five categories: occupational programs, liberal arts programs, professional programs, teachers' programs, and two-year curricula. In the year studied, the figures indicate that there were about 1,400 liberal arts programs available, of which 80 percent were offered by liberal arts and comprehensive colleges, principally in the private sector. Similarly, 75 percent of the occupational programs were in two-year colleges; and two-year occupational programs were only available, for the most part, in two-year institutions. Eighty percent of the teacher training programs were offered by two types of colleges: liberal arts and comprehensive colleges, which, together, are 41 percent of all collegiate institutions.

In summary, the clustering of program offerings around certain types of institutions reduces the actual diversity of institutional settings available for individuals to pursue their personal interests. While over 2,800 institutions offered more than 5,600 programs, 80 percent of these are usually concentrated in one or two institutional types and limited to less than 40 percent of the institutions.

Table 15 displays similar data for the noncollegiate sector, with different categories used to reflect the various program offerings of the occupational schools. Once again, the expected concentrations are observed: technical institutes offer business, office, and technical programs, business schools offer business-related programs, and so forth. There is considerable program diversity within some types of occupational schools, however, especially among vocational and technical schools and business schools.

Table 4-14: Number of Programs Offered by Collegiate Institutions,
by Type of Institution, 1970-71

Institutional Type	Occupational Programs		Liberal Arts		Professional Programs		Teachers Programs		Two-year Programs	
	Pub.	Pri.	Pub.	Pri.	Pub.	Pri.	Pub.	Pri.	Pub.	Pri.
Research Universities.....	20	3	56	0	56	36	55	27	55	37
Other Ph.D. Granting Inst's.....	17	3	44	25	39	23	42	21	0	0
Comprehensive Colleges.....	104	21	315	24	133	142	312	138	0	99
Liberal Arts Colleges.....	3	40	25	660	5	119	22	519	1	5
Two-Year Colleges.....	708	132	11	3	5	1	10	1	743	236
Divinity Schools.....	-	11	-	59	-	187	-	36	-	0
Health Profession Schools*.....	15	4	6	4	34	35	1	0	0	0
Schools of Engineering & Tech...	3	9	1	2	7	27	0	0	0	0
Schools of Business & Mgmt.....	0	18	1	7	1	21	1	8	0	1
Schools of Art, Music & Design..	0	4	1	14	2	37	1	23	0	0
Schools of Law.....	0	0	0	0	2	12	0	0	0	0
Teachers Colleges.....	0	1	0	0	1	2	0	6	0	0
Other Specialized Inst's.....	0	0	7	5	14	6	1	3	0	0
Total.....	870	246	467	803	299	648	445	782	799	378

Source: U.S. Office of Education, HEGIS, "Institutional Characteristics of Colleges and Universities," preliminary data.

*Includes medical and other health professions schools.

Table 4-15: Number and Type of Curricular Programs Offered by Noncollegiate Schools, 1970-71

Figures without parentheses = number of programs
Figures in parentheses = number of institutions offering the programs

Types of Curricular Programs	Types of Career Schools								
	Voc. & Tech.	Technical	Business	Cosmetology	Flight	Trade	Hospital	Correspondence	Others
Agri-business....	36 (18)	11 (6)	1 (1)	0 (0)	0 (0)	1 (1)	0 (0)	4 (4)	1 (1)
Marketing Distribution..	159 (65)	30 (15)	228 (97)	5 (3)	2 (2)	15 (12)	4 (3)	75 (35)	3 (2)
Health.....	395 (144)	72 (23)	56 (40)	1 (1)	0 (0)	2 (1)	1,308 (927)	6 (4)	4 (2)
Home Economics..	86 (33)	7 (3)	20 (13)	0 (0)	0 (0)	2 (2)	2 (2)	8 (6)	1 (1)
Business and Office.....	1,706 (36)	130 (19)	17,237 (327)	0 (0)	21 (1)	0 (0)	83 (3)	565 (15)	61 (1)
Technical.....	177 (85)	108 (73)	64 (43)	2 (2)	24 (18)	35 (19)	35 (27)	74 (17)	4 (1)
Trade and Industrial....	702 (112)	221 (63)	69 (39)	554 (532)	21 (13)	158 (77)	4 (3)	220 (33)	13 (3)

Source: U.S. Office of Education, *Directory of Postsecondary Schools with Occupational Programs, 1971*.

Note: Types of curricular programs include the following: (1) Agri-business Occupations: such programs as agricultural mechanics, ornamental horticulture, and forestry. (2) Marketing and Distribution Occupations: such programs as finance and credit, general merchandise, and retail trade. (3) Health Occupations: such programs as dental hygiene, practical nursing, and physical therapy. (4) Home Economics Occupations: such programs as clothing and textile, food and nutrition, and food management. (5) Business and Office Occupations: such programs as data processing, accounting, and stenography. (6) Technical Occupations: such programs as automotive, electrical, and metallurgical technologies. (7) Trade and Industrial Occupations: such programs as appliance repair, auto mechanics, and body and fender repair.

In sum, there is a great variety of program offerings but relatively little dispersion among various institutions in the collegiate and noncollegiate sectors. This is not to argue, of course, that all institutions should attempt to provide the full range of programs. In many cases, diversity (as well as excellence) is best served by institutions that concentrate on a single purpose.

3. Institutional Size

Size has been one of the traditional sources of diversity, and to some, size is one of the most important factors describing the vitality of an institution (such as its capacity for change).¹³

Tables 16 and 17 present the size distribution of institutions and enrollment in both collegiate and noncollegiate sectors differentiated by type and control. From these tables, it is clear that there are no small (less than 5,000 enrollment) public universities; for individuals who want to participate in a small university, only private institutions are available, and there are only 13 of them. Conversely, essentially all (97 percent) of the liberal arts colleges in the United States have an enrollment of less than 2,500 students. Among private two-year colleges, 88 percent of the institutions with 58 percent of the enrollment enroll less than 1,000 students; in public two-year institutions 53 percent of the enrollment is in institutions that enroll more than 5,000 students.

All of the private occupational schools and 64 percent of the private collegiate schools enroll less than 1,000 students, as

Table 4-16: Distributions of Enrollment at Public Institutions by Size and Type, 1970-71

Figures without parentheses = number of institutions
Figures with parentheses = percent of enrollment by type

INSTITUTIONAL TYPES	ENROLLMENT RANGE					TOTAL
	0-999	1,000-2,499	2,500-4,999	5,000-9,999	10,000 over	
Collegiate Sector Leading and Other Research Universities	0 (0%)	0 (0%)	0 (0%)	1 (0.6%)	55 (94%)	56 (100%)
Large and Small Doctoral Granting Ins.	0 (0%)	0 (0%)	0 (0%)	22 (31%)	23 (69%)	45 (100%)
Comprehensive Colleges	0 (0%)	70 (6%)	86 (15%)	96 (31%)	68 (48%)	320 (100%)
Selective and Less Selective Liberal Arts Colleges	19 (37%)	6 (29%)	4 (34%)	0 (0)	0 (0)	29 (100%)
Two-Year Colleges	288 (7%)	255 (18%)	135 (22%)	88 (27%)	40 (26%)	806 (100%)
Specialized and Professional Institutions	37 (19%)	16 (23%)	6 (20%)	3 (17%)	2 (21%)	64 (100%)
Noncollegiate Sector Technical Institutes & Trade Schools	129 (23%)	24 (29%)	23 (48%)	0 (0)	0 (0)	176 (100%)
Others (Business, Cosmetology, Flight, Hospital, Tech- Vocational Schools)	633 (53%)	23 (8%)	46 (39%)	0 (0)	0 (0)	732 (100%)
Correspondence Schools	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (100%)

Source: U.S. Office of Education, *Higher Education General Information Survey: Institutional Characteristics of Colleges and Universities, 1970-71.*

*Not included in NCFPE Data Bank.

Table 4-17: Distributions of Enrollment at Private Institutions by Size and Type, 1970-71

Figures without parentheses = number of institutions
Figures with parentheses = percent of enrollment by type

INSTITUTIONAL TYPES	ENROLLMENT RANGE					TOTAL
	0-999	1,000-2,499	2,500-4,999	5,000-9,999	10,000 over	
Collegiate Sector Leading and Other Research Universities	1 (1.5%)	2 (5.5%)	5 (5.5%)	17 (32%)	13 (62%)	38 (100%)
Large and Small Doctoral Granting Ins.	0 (0)	1 (1%)	4 (37%)	11 (30%)	9 (63%)	25 (100%)
Comprehensive Colleges	0 (0)	62 (22%)	59 (37%)	24 (32%)	4 (9%)	149 (100%)
Selective and Less Selective Liberal Arts Coll.	423 (40%)	241 (54%)	10 (5%)	1 (5%)	1 (1%)	675 (100%)
Two-Year Colleges	225 (58%)	24 (25%)	5 (14%)	1 (3%)	0 (0)	255 (100%)
Specialized and Professional Institutions	327 (51%)	26 (27%)	11 (19%)	1 (3%)	0 (0)	375 (100%)
Noncollegiate Sector Technical Institutes & Trade Schools	142 (100%)	0	0	0	0	142 (100%)
Others (Business, Cosmetology, Flight, Hospital, Tech- Vocational Schools)	1,243 (100%)	0	0	0	0	1,243 (100%)
Correspondence Schools	*	*	*	*	*	13 (est.)

Source: U.S. Office of Education, *Higher Education General Information Survey: Institutional Characteristics of Colleges and Universities, 1970-71.*

compared with 87 percent of the public occupational schools and 26 percent of the public collegiate schools. While most private colleges and universities are small and many public colleges and universities are large, they both offer, as a group, enrollment opportunities that are spread relatively evenly across the entire spectrum of institutional sizes. In this respect, the collegiate sector is very diverse.

4. Flexibility

One of the forces for homogenization is the strong tendency in postsecondary education for sequential attendance. Such a uniform trend has resulted from a powerful social pressure to students to "stay in school."¹⁴ The lack of viable alternatives, to postsecondary education effectively "conscripts" many youths into educational institutions. In recent years, opportunities for students to "stop out" or combine work experience with part-time study have been offered by many institutions, and many other institutions have adopted calendar changes that give students greater flexibility to participate in many experiential learning activities. Part-time study has long been common, of course, among students enrolled in occupational schools.

Much more important, however, are such changes as the development of cluster colleges, inter-institutional programs that give students a depth of resources otherwise denied them, special programs to help students overcome educational and other disadvantages, "universities without walls" (for example, New York's Empire State College), large-scale use of instructional television, and special institutions designed to meet the needs of minority students. Although there are substantial obstacles to the use of public funds for educational innovation, many of the most significant departures from the traditional forms and methods have been achieved by public institutions. It is at least possible that government is as willing to provide financial support for this kind of diversity as

educators are to propose nontraditional and truly innovative programs.

To summarize, the development of diverse forms and methods of postsecondary education is in some degree inhibited by sources of financing, but there are no insurmountable financial obstacles to real diversity. Greater diversity is essential, in the Commission's view, if postsecondary education is to serve fully the varied needs of students and the public in our pluralistic society. Forms and conditions of financial support that intentionally or inadvertently discourage diversity must be avoided.

Institutional Excellence

The Commission has stated that "Postsecondary education should strive for excellence in all instruction and other learning opportunities, and in research and public service." Excellence means, in short, that an institution is doing a job as well as it can be done. To determine whether an institution has achieved excellence, one must ask how well that institution is training welders, developing the skills and aesthetic sense of young artists, researching the causes of cancer, conducting tax institutes for lawyers, or pursuing any other goals it has set for itself. Merely having the necessary resources—the library, the faculty, the instructional equipment—is not enough. The question is, how well are those resources used?

But to measure excellence becomes ever more difficult, for the movement of America's postsecondary educational system from mass to universal education has multiplied the demands on the system and the viewpoints about what excellence means. Not only are there divergent perspectives of teachers, administrators, and taxpayers, but there are the increasingly divergent perspectives of students as well. Aristotle long ago described this difficulty in these words:

At present, opinion is divided about the subjects of education. People do not all take the same position about what should be learned by the young, either with a view to excellence or with a view to the best life; nor is it clear whether their studies should be directed mainly to the intellectual or to moral character.... Each kind of study gets some support. Even about those that make for excellence there is no agreement, for men do not all honour the same excellence, and so naturally they differ about the proper training for it.

From the perspective of college faculty members, excellence may mean freedom to teach what they want, in the way they want, to the most able students, without fear of being fired. From the students' vantage point, excellence may mean the opportunity to develop their own strengths to their maximum capacity, to enhance the quality of their lives, to increase their own and society's well-being, and to learn to cope with change.

Nevertheless, without carefully considered goals and measures of excellence, institutions may waste money and resources. With measures of excellence, the dull or slipshod course can be dropped, and a loose or spiritless academic environment can be invigorated. Without such measures, costs can mount with no improvement in quality. As the Newman report warns, "It is the time and talent of faculty and students which are the major costs of higher education, and a conventional budget fails to reflect whether this time and talent are used efficiently." Thus, questions about excellence lead to questions about the cost effectiveness of instructional methods. But measures of excellence in this sense—the achievement of the best results for the money and other resources expended—remain in a rudimentary stage, at best.

There have been several important efforts in recent years, however, to develop measures of excellence. In his 1966 comparative study of graduate departments, Allan M. Cartter asked faculty members to judge (1) their colleagues in other institutions,

(2) the doctoral training program in their field, and (3) the changes in the relative standing of departments in their field over the past five years.¹⁵ In a follow-up study four years later, Kenneth D. Roose and Charles J. Andersen used the same basic technique, questioning faculty members on the three measures identified by Cartter and asking them to rank all departments as "distinguished," "strong," "good," "adequate," or "marginal."¹⁶

The authors of the Gourman Report in 1967-68 tried to measure a whole spectrum of quality, covering institutional departments, research and library tools, plant efficiency, administration-faculty relationships, national reputation (counting such factors as the number of visiting professors, foreign students, and out-of-state students), faculty morale, methods of instruction, student ratios, salaries, research activities, student services, and many other institutional functions.¹⁷ But to do so, the authors had to rely on available data reported by professional societies, commercial establishments, fellowship and scholarship foundations, government, and nonprofit corporations, and similar sources; and they did not translate that data into measures of quality.

Another attempt at measuring quality is found in David G. Brown's *The Mobile Professors* [1967].¹⁸ Brown selected eight factors to make up a "prestige" or quality-per-student index. They include the percentage of faculty with Ph.D.'s, the total number of full-time faculty, and the total current income per student. Each of these factors is quantifiable, but all of them represent "stature in the eyes of the scholarly community"; that is, since the links between resources and quality have not been adequately measured, the relationship of each factor to quality is not satisfactorily explained.

Other surveys have attempted to measure student, rather than faculty, attitudes on instruction. These also depend upon ratings such as "distinguished" or "adequate" and do not go beyond a sampling

of purely subjective judgments at one point in time. Nevertheless, asking the opinions of those directly affected—the students—is a step in the right direction. The Carnegie Commission has surveyed students as well as faculty and found the students satisfied with collegiate institutions.¹⁹ A Commissioner of the National Commission on the Financing of Postsecondary Education also undertook a survey and found that students assigned primary importance to the quality of instruction. In general, both studies found students to be largely satisfied with their institutions but in favor of a greater emphasis upon flexible instructional programs aimed at increasing students' self-development and employability.

It may also be noted that there have been many studies in recent years that have attempted to measure the educational achievement of elementary and secondary schools in imparting specific skills, general knowledge, and personal development in relation to the resources available to these schools. Perhaps the best known is the much debated Coleman study, *Equality of Educational Opportunity*; several other studies are described in the U.S. Office of Education's report *Do Teachers Make a Difference*. As yet, however, the most that can be said about these studies is that they represent a long needed effort to develop the tools for educational evaluation and resource allocation guidelines and that they demonstrate how much more needs to be done not only to identify measures of excellence but also to identify the factors that are most important to its achievement.

Despite the fact that measures of excellence remain in a relatively rudimentary stage, there are hundreds of local, regional, and national accrediting agencies that evaluate postsecondary educational institutions, frequently with respect to what such agencies refer to as quality or excellence. For example, the objectives and procedures for accreditation outlined by the National Association of Trade and Technical Schools include such phrasing as: "assisting...schools to become better," "assuring...quality," and "setting standards to which...

schools can aspire." Similarly, the Association of Independent Colleges and Schools states in its 1973 "Operating Criteria for Accredited Institutions" that it "seeks not conformity with minimum requirements but a striving for excellence."

Accrediting agencies are generally aware, however, of the difficulty of applying such rhetoric to their task. Those who have studied accreditation reports have long been troubled by their subjectivity and the absence of solid evidence of achievement in examiners' reports. A 1967 study of the North Central Association's accrediting reports by Paul L. Dressel said that "the examiners' reports coming in were notably weak in comments on evidence of institutional quality as reflected in the achievement of students." And in 1972 in *A Current Perspective on Accreditation*, Frank G. Dickey and Jerry W. Miller noted that accrediting agencies differ widely in judging and measuring program quality and added:

Lacking adequate indices and proven techniques of measurement, and occasionally lacking adequate concepts of educational effectiveness or excellence, accrediting agencies have been forced to rely more than is ideally desirable both on personal judgments which are fallible and on quantitative factors which do not always have a direct or proven correlation with excellence.²⁰

Clearly, there is no simple solution to the problem of measuring excellence. Nevertheless, this Commission reaffirms the necessity and desirability for excellence in every form of postsecondary education, and urges that the search for measurements of excellence be continued, as the search itself will encourage the effort to achieve excellence.

Institutional Independence

Independence, as defined by the Commission as an objective for postsecondary education, means that postsecondary educational institutions should have the freedom and flexibility necessary to maintain

institutional and professional integrity and to enable them to meet creatively and responsively their educational goals. Financing methods and procedures should not restrict that independence except in the service of some equal or higher objective. Thus, institutions should not be encumbered with procedural requirements that unnecessarily restrict their freedom to carry on their main functions. They should not be threatened with a loss of financial support for reasons unrelated to their effectiveness in meeting the legitimate demands upon them for instruction, research, or public service. They should be able to enjoy that degree of stability in financial support that is essential to effective program planning. And they must be assured reasonable freedom to employ the financial support they receive according to the best professional judgments available to them.

Those who provide financial support do, of course, attempt to restrict institutional independence from time to time. Private funders often restrict their gifts to certain types of student aid and construction projects. State legislators from time to time insist upon the establishment or abolishment of specific programs and demand compliance with their views on campus administration. Federal agencies deny aid for certain students or earmark funds for purposes that are not ranked high by the institutions. Of the major sources of funds for postsecondary education, only students seem to provide support with the fewest strings. But students may, in fact, exercise the greatest influence of all in their choices of institutions, programs, courses, and teachers.

Unfortunately, there are as yet no direct measures of institutional independence. The degree of independence enjoyed by private institutions is largely a result of negotiations between administrators and a variety of funders. If an institution's independence has become unduly restricted, it is the responsibility of

administrators or faculty or students to make that judgment known. Much the same is true for public institutions, except that in their case legislators and governors also have a role in determining the proper balance between public and institutional needs.

It is frequently argued that institutions that receive support from a variety of sources have greater independence than those that receive support from only a few sources; but there is little evidence to support such a conclusion. An institution dependent upon a large variety of sources may find substantial conflict among the interests of those sources, or it may lack the one major, reliable source of support that can assure it financial stability.

Many also contend that public support is inherently more restrictive than private support; but the evidence here, too, is far from clear. Public funds generally carry with them more stringent accounting requirements as well as a demand for accountability in a broader sense. But these requirements do not necessarily infringe upon essential freedom, and, when complied with, they may result in much more generous and constructive financial support than would be available from private sources.

The figures in Table 18 indicate the principal sources of financial support for the major categories of institutions. They show that proprietary schools have the most concentrated support structure and private (nonprofit) institutions have the most diverse. Whether this concentration results in greater independence for private institutions generally, however, is a matter of opinion. In many ways, proprietary institutions have considerably more freedom than the others, despite their heavy reliance upon a single financing source—student charges. Nevertheless, they are probably also more vulnerable to economic failure than other institutions of postsecondary education.

Table 4-18: Percentage Distribution of Reported Institutional Support, Sources of Major Institutional Category, 1971-72

Institutional Type	Govern- ment ¹	Student Charges	Private Sources ²	Aux.Ent. & Other
Research and Other Ph.D. Granting Institutions:				
Public.....	60.7%	11.6%	4.3%	23.4%
Private.....	35.7	19.1	16.1	29.1
Comprehensive Colleges:				
Public.....	64.5%	14.9%	1.7%	18.9%
Private.....	8.5	54.2	10.3	27.0
Liberal Arts Colleges:				
Public.....	76.9%	11.5%	1.0%	10.6%
Private.....	7.6	46.0	19.1	28.3
Two-Year Colleges:				
Public.....	79.5%	12.0%	0.8%	7.6%
Private.....	8.9	48.6	15.4	28.1
Noncollegiate Institutions:				
Public.....	80.5%	8.7%	1.1%	9.7%
Private.....	29.5	39.5	6.5	25.5
Proprietary.....	2.0	82.0	1.0	15.0

Source: U.S. Office of Education, HEGIS, *Financial Statistics of Higher Education (1971-72)*; NCFPE Survey of Noncollegiate Institutions.

¹ Federal, state, and local government. Includes support for education; general, sponsored research and other activities; and student aid.

² Gifts and endowment income.

Independence, in the case of public institutions, is also frequently equated with autonomy under state constitutions. Those state universities such as the University of California and the University of Michigan are said to owe much of their greatness to the fact that they are assured considerable autonomy and freedom from administrative or legislative interference by their state constitutions. History, however, has on several occasions provided

cause for skepticism about this claim. Several institutions with apparent institutional immunity have nevertheless found themselves subjected to great pressures, while many institutions without such protection have thrived.

Institutional Accountability

Institutions of postsecondary education must employ procedures that will enable funders to determine whether resources are being used to achieve the outcomes the funders desire. Accountability is in this sense the price of independence for postsecondary institutions; if they are to be assured independence, they must accept accountability.

Accountability is achieved in many ways. On one level, it is achieved through institutional compliance with regulations regarding the handling of money, safety of employees and students, environmental protection, civil rights, and other matters of public concern. On another, it has to do with using resources to do most effectively those tasks assigned to postsecondary institutions. This kind of accountability involves the outputs of instruction, research, and public service. To develop this second form of accountability, there must first be some agreement on the measurable goals of postsecondary education, and then on the appropriate measures of accomplishment.

As yet, however, there is little agreement about either goals or measures of accomplishments. Thus, accountability is in large degree a matter of subjective judgment on the part of funders. They may be satisfied that the institutions are accountable, or they may be seriously concerned about what they view as insufficient accountability. At present, some public funders have indicated that they are dissatisfied; although they may have the means of enforcing accountability, they lack the knowledge necessary to do so fully.

Funders of postsecondary educational institutions and participants (students, faculty and administrators) increasingly emphasize the need for:

1. Resources to be accounted for in relationship to the accomplishment of objectives. More and more funders and participants want to know how much institutions spend for each objective and what is accomplished.
2. Demonstration that the resources available are used efficiently. Funders and participants increasingly ask if the resources are being used in the best possible manner in order to get the most productivity.
3. Evidence that objectives selected respond to the needs of participants and the desires of funders. Objectives must serve both participants and funders, and these in large part do not have similar objectives.

While these capabilities are under development to a modest degree, they are not now widely available. Thus, it cannot be said that the objective of accountability is now being met fully by most institutions.

Adequacy of Financial Resources

The responsibility for financing postsecondary education has been and must continue to be shared by students, government, and private individuals and organizations. There is neither a simple rule for assigning a specific responsibility to a single source, nor an overall financing pattern that can be applied to all institutions. Thus, a sharing of the responsibility for supporting postsecondary education is in itself an important objective. In this case, however, the data are quite clear. As described in Chapter 3 of this report, students pay approximately 20 percent of the direct costs of their education, state and local governments provide 32 percent, the federal government provides nearly

27 percent, gifts and endowment earnings supply 9 percent, and auxiliary enterprises and other institutional activities provide the remaining 12 percent.

In view of the evidence presented in this chapter that several objectives have not been accomplished with current levels and patterns of financing, it must be concluded that the level of financing is inadequate. It is also evident, however, that the financing of postsecondary education must compete for support with many other important public functions and that it is unrealistic to expect that every objective for postsecondary education can be fully accomplished in a short period of time. Priorities must be established among the objectives for postsecondary education and alternative financing patterns evaluated in terms of their accomplishment of those objectives—with the understanding that no single pattern is likely to result in the full achievement of all objectives.

Conclusions

1. The postsecondary education objective of student access, when measured in terms of income, race, ethnic group, sex, and geographic location, is not yet accomplished.
 - a. The participation in postsecondary education of individuals 18-24 years of age from families earning less than \$10,000 per year is 17.3 percent while the corresponding participation rate of families earning more than \$10,000 per year is 38 percent.
 - b. The rates of participation in postsecondary education for individuals from certain racial and ethnic minorities are far below the participation rates of other Americans.

- c. Women are also underrepresented in postsecondary institutions, constituting 51 percent of the 18-24 year old age group but only 44 percent of undergraduate enrollment and 39 percent of graduate enrollment.
 - d. The location of collegiate institutions best serves those individuals who live in small metropolitan areas. Those who live in large metropolitan areas are only somewhat better served than those who live in rural areas. Lack of data on noncollegiate institutions does not permit us to draw corresponding conclusions for the noncollegiate sector.
- 2. Family income alone is not the only important variable in determining an individual's decision to seek postsecondary education. Parental education and occupation may be even more important in affecting postsecondary enrollment and access measures. Among other factors, rigid high school tracking is the single most significant controllable factor.
 - 3. There is inadequate information to enable the Commission to make a firm judgment concerning the degree of student choice. Further research could provide a more complete understanding of the interactive processes of admission, financial aid, and enrollment. Aggregate data from both the public and private sectors would suggest, however, that those students who do obtain access to some institution of postsecondary education are distributed proportionately according to income level within both sectors.
 - 4. The extent to which students are assured an opportunity to achieve their educational objectives, once enrolled, is particularly difficult to measure. Program completion rates have been examined as one limited measure for this objective, and the cost of attendance does not appear to be a controlling

variable in program completion. For many students, however, program completion is an inappropriate measure of opportunity, particularly for those enrolled in any occupationally-oriented institutions, where students may be more concerned with receiving particular instructional services than with completion of a degree or certificate program.

5. There are many program offerings available in a variety of different sizes and types of institutions. Nevertheless, the existence of a multiplicity of programs does not necessarily provide diversity, because the programs of many institutions are very similar. To the extent, however, that individuals may wish to enroll in programs with different characteristics, diversity may well be limited.
6. Although the Commission is aware of a variety of efforts to support and measure excellence in postsecondary education, it finds excellence difficult to evaluate and finds no adequate measures to assess fully the level of achievement of the objective of excellence.
7. Current evidence indicates that institutions that receive substantial financial support from a variety of public or private sources are neither more independent nor better able to achieve their educational objectives than those primarily dependent on a single source of support. The relative availability or scarcity of financial resources is probably the most significant factor affecting institutional independence.
8. Historically, institutions have attempted to meet their responsibilities for financial accountability to their major sources of financial support through a variety of techniques. Many of the information and analytical procedures now required for the efficient and effective allocation of resources in

increasingly complex institutions and for the determination of postsecondary education policy are not readily available, and those that are available are not widely used.

9. Although the financing of postsecondary education is a responsibility shared by many sources, the total amount of resources currently made available is not adequate to accomplish fully all of the objectives identified by the Commission.

CHAPTER 5

THE INCIDENCE OF FINANCIAL DISTRESS
AMONG INSTITUTIONS OF
POSTSECONDARY EDUCATION

THE INCIDENCE OF FINANCIAL DISTRESS
AMONG INSTITUTIONS OF POSTSECONDARY EDUCATION

Throughout the late 1960s and early 1970s, a substantial number of reports have discussed the "financial crisis" in the collegiate sector of postsecondary education.* Whether or not one agrees with some of the dire predictions that have been presented, it is difficult to remain unaware of the predominantly bad news that has been forthcoming about the financial condition of colleges and universities, private and public. If the conclusions in several of these reports are applicable to the collegiate sector generally, the current system of financing is working to the detriment of many of the institutions it is intended to support. The consequences are potentially serious for the whole enterprise.

According to these reports, institutional operating deficits have become larger and more frequent, and several private institutions have had to close their doors. Other institutions have been forced to dip into endowment funds to meet current costs or have gone from private to public ownership to avoid closing. As competition for students and financial support has intensified in the past few years, an increasing number of institutions are reported to have found themselves in serious financial difficulty.

*Financial distress among noncollegiate institutions has not been the subject of extensive study. This situation may change, however, as the importance of the noncollegiate sector becomes more widely recognized.

It may be argued, of course, that competition for students and resources among educational institutions is healthy and desirable. Such competition may help to weed out institutions and programs that have outgrown their usefulness or that were never well justified. In addition, it may serve to encourage collegiate institutions to respond more quickly to the needs of students and the public, and result in significant changes in the structure of postsecondary education. Yet competition may also go beyond this to become a crippling disease that leaves many institutions paralyzed and unable to respond to legitimate demands upon them. This result, say several who have studied the problem, has become a clear and present danger.

In response to these reports, which were prominent during the debate preceding enactment of the Education Amendments of 1972, Congress called on this Commission to undertake an investigation of the "nature and causes of serious financial distress facing institutions of postsecondary education."* The Commission has carried out this directive in four stages: first, it has examined what others have had to say over the past several years about manifestations of financial distress; second, it has collected and analyzed the limited institutional financial data that are currently available; third, it has drawn up a proposal for substantially improving such data; and, fourth, it has drawn from its findings some specific conclusions about the current incidence of financial distress.

For the purpose of its study, the Commission has assumed that financial distress would exist in the postsecondary education enterprise or in one of its major sectors when the lack of money and other resources prevented the desired degree of achievement of national objectives. Financial distress may occur in the enterprise as a whole, in certain segments of the enterprise, or among

*In response, Congress added a provision authorizing up to \$40 million per year in grants to "institutions of higher education, which are determined...to be in serious financial distress" to enable them to determine the causes of such distress and the means for alleviating it. This provision, however, has not been implemented because no funds have been appropriated for it.

individual institutions. Isolated cases of financial distress that result from mismanagement or a basic change in society's needs are not necessarily matters of public concern. But if financial distress threatens to become widespread as a result of factors beyond the control of the institutions and is likely seriously to impair their collective ability to accomplish national objectives, then it is a matter requiring an effective public policy response.

Recent Studies and Reports

In 1971, the Carnegie Commission on Higher Education reported that its staff bibliography on the growing financial problems of higher education included some 70 listings of articles, reports, and studies for a three-year period ending in early 1970.¹ Since then, the literature on this subject has continued to grow, with the Carnegie Commission itself taking an important lead in studying the question.²

Concern over financial distress in the collegiate sector is not of recent origin, however. Since the end of World War II, several Presidential task forces, starting with the President's Commission on Higher Education in 1947, have addressed themselves to this issue. The 1947 report called for a massive infusion of public aid to meet a newly defined goal: greatly expanded access to higher education for the nation's youth so that they might avail themselves of additional economic and cultural opportunities.³ The second of two study commissions appointed by President Eisenhower also called for increased public financing for higher education, and proposed a doubling of teacher salaries within a decade (1957 to 1967) together with further expansion of student and institutional aid.⁴ A common theme of those early reports was that higher education had become, in effect, a depressed sector of the U.S. economy and needed prompt public attention.

For a time, the burgeoning enrollments of the 1960s shifted the focus of concern from the financial condition of the enterprise to its ability to meet the challenge of accelerating growth. In the past several years, however, as enrollment growth has slowed—and now, for many institutions, apparently stopped altogether—there are again serious fears that some institutions, public and private, will not survive the continuing struggle to obtain the income necessary to meet rapidly rising costs.

Authors who have studied the problem in depth and who have determined that there is indeed a crisis fall into one of two camps: those who fear that large numbers of institutions may now be faced with financial or academic bankruptcy and those who now share a strong sense of concern but believe that there is no immediate threat of widespread financial distress.⁵ (See Appendix C for a summary of recent studies.)

Among the first group are William Jellema and the team of Garven Hudgins and Ione Phillips, whose reports have focused upon what they see as worsening institutional deficits, a growing gap between expenditures and current income, and, in the case of public institutions, the debilitating effects of inadequate public financing.⁶ Jellema reported in 1971 that a significant percentage of the more than 500 private colleges and universities he had studied were facing serious operating deficits. Following up two years later, he reported that the situation had grown worse and threatened with financial distress one-fifth to one-third of the institutions in his sample. The threat is most serious, according to Jellema, in the North-central states, where as many as two-thirds of the institutions in his study are threatened if present financial conditions persist.⁷

Representative of the second group is Earl F. Cheit, author of *The New Depression in Higher Education* and a follow-up study entitled *The New Depression Revisited*.⁸ In his first, more pessimistic report, Cheit concluded that financial erosion was widespread among both

public and private colleges and universities. Based on his data, the Carnegie Commission staff calculated that roughly two-thirds of all collegiate institutions were either headed for or already in financial trouble. Two years later, Cheit reported that "the money problems of higher education have grown to become its dominant concern"⁹ and that 27 percent of the institutions in his sample were worse off financially than two years earlier. At the same time, he found that many institutions had achieved a "fragile stability" by cutting back on their expenditures and by undergoing considerable managerial change to close the gap between costs and income, at least temporarily. Another investigator, Robert H. Atwell, reported similar findings in 1973 for a small group of public and private research universities—an institutional class that, Cheit and Atwell appear to agree, is the most financially insecure of all collegiate institutions.¹⁰

According to a third investigator, Joseph Froomkin, "the precarious balance in postsecondary education budgets," observed by Cheit and Atwell and in his own studies, "was made possible at the expense of real earnings of the professional staff."¹¹ If so, the colleges and universities appear to be coming full circle since 1960 when the second Eisenhower report urged that faculty members no longer be asked to subsidize their institutions through low salaries.

The causes of financial distress in collegiate institutions identified in these and other studies may be grouped into one of five categories: enrollment changes, growth in educational programs and activities, ineffective management and administration, complexity of governance, and various external factors.

Enrollment changes. Changes in the rate of growth and the distribution of enrollment rank high among the reported short- and long-range causes of serious financial distress. It is generally agreed that enrollment from the traditional undergraduate "college-age" population (18-21 years old) will grow little, if at all, for

some time to come. A number of external factors, including termination of the draft (and enrollment in college as a way of putting off the draft), have resulted in actual declines in first-year applications and enrollments for many institutions. The result is expected to be competition among institutions for students.

Moreover, some believe that the extension of federal aid to students attending noncollegiate institutions may produce a further loss to the collegiate sector. Two-year colleges are the only type of institution expected to continue to grow during the next decade, and there is mounting evidence that they, too, are facing difficulties.¹²

Growth of educational programs and activities. Among many institutions, the early signs of financial distress have coincided with a reduction in financial support for research, graduate instruction, public service projects, and certain other activities. The previous levels of financial support, several studies suggest, permitted a proliferation of activities and some wasteful duplication as a result of unduly ambitious expansion and upgrading of educational programs. Several investigators have concluded that the programs and activities undertaken by postsecondary institutions have grown beyond the society's willingness to sustain them.

Much of this growth occurred in response to public policy and public demands for new services and new instructional programs during the 1960s. To some observers, a culling and pruning of such programs is overdue. Others argue, however, that many of these programs, particularly the high-cost programs such as those in the health field, are absolutely essential and must be continued. Many institutions, they point out, have recently been required to provide new services in response to changing student needs (such as educational and occupational counseling), the growing problem of campus security and student safety, and the increased interest in protection of the environment. All of these factors have added significantly to institutional operating costs.

Ineffective financial management and administration. Several studies have criticized the absence of effective planning and budgeting among collegiate institutions and the dearth of reliable data for decision making. Some studies conclude that poor management contributes to or even causes institutional financial distress. Others point to the inherent obstacles to effective management, including such factors as "tenured-in" faculty, unforeseen enrollment shifts, the uncertainty of public appropriations, and sudden major changes in public policy.

Complex institutional governance. The complexity of institutional governance is often mentioned as a prime cause for many of the financial problems of colleges and universities. Reference is made to the numerous layers of responsibility, to a reluctance of faculties to accept changes in their ways of doing things, and to unwarranted intervention by legislative bodies and governing boards. Some writers believe that the advent of unionization among faculties will further complicate academic management.

External factors and public policy. Continuing inflation, periodic economic recessions, and other contemporary economic conditions are among the generally accepted causes of temporary and recurring financial distress in postsecondary education. Changes in public policy with respect to such matters as the age of majority, compulsory military service, and special tax benefits are also believed to have a substantial impact.

Not every study on financing postsecondary education, however, has concluded that there is at present serious financial distress among collegiate institutions. For example, Alice Rivlin, principal author of *Toward a Long-Range Plan for Federal Financial Support for Higher Education*, testified before Congress in 1971 that her study had uncovered "no general crisis of higher education finance."¹³ There were a number of specific problems, she said, including cutbacks in federal support for research, overly ambitious attempts on the part of some private institutions to improve educational quality,

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continuation of programs no longer desired by students, smaller than usual increases in state support, and the effects of economic recession and inflation. But, she reported, "it is certainly not obvious that a program of general support for higher education is the appropriate answer to all or even most of [the] varied financial problems."

A similar conclusion was drawn in two studies by Columbia Research Associates in 1971 and 1972.¹⁴ Educational opportunity in postsecondary education, according to these reports, was "not significantly threatened by its present financial condition." The investigators reported finding "continued erosion of the relative importance of private education," but such erosion was not identified as a cause for alarm. Both studies emphasized a need for better management through careful planning based upon well-articulated objectives. In the second of these two studies, it was noted that there seemed to have been a slight worsening of the financial situation of the colleges under study, but this finding was reported only as an "impression" without statistical verification.

The *Report on Higher Education* by the Newman task force, together with its later reports entitled *National Policy and Higher Education* and *Data and Decision-Making in Postsecondary Education*, are notable in this regard for having entirely ignored the question of financial distress.¹⁵ Although the Newman task force was highly critical of many aspects of postsecondary education, including its management and administration, it apparently found no reason to associate those weaknesses explicitly with institutional financial problems.

The final Carnegie Commission report and the 1973 report of the Committee for Economic Development also fail to address directly the problem of financial distress.¹⁶ Both reports contain a number of recommendations, however, that bear upon the problem. Among other suggestions, they recommend steps to improve institutional management, regain an equilibrium between income and expenditures, and correct existing imbalances between public and private institutions (such as

the public-private tuition differential). Similar recommendations may be found in a number of state-sponsored studies of higher education, particularly those dealing with the problems of private institutions.

In short, there has been a substantial number of reports issued during the past six years dealing directly or indirectly with the question of financial distress among collegiate institutions. Those who have studied the matter are far from unanimous, however, about the seriousness of the problem and the necessity for governmental intervention. Of special significance is the fact that the literature provides clear evidence that there is no agreement on a uniform definition regarding the nature of financial distress among post-secondary institutions, nor are there generally accepted standards or uniform criteria to ascertain its existence or extent. Thus, a careful review of these studies yields no clear understanding of the extent of financial distress or of its implications for public policy.

An Analysis of Selected Statistical Evidence

There is no indisputable evidence of the extent to which financial difficulties in postsecondary education have impaired the achievement of public policy objectives. Nevertheless, the statistical evidence examined by the Commission together with the findings of previous studies provide sufficient justification for genuine concern, for they suggest that there may be some instances in which serious financial distress may soon have adverse effects on achieving those objectives.

The Commission has examined several different indicators of potential or continuing financial difficulty among collegiate institutions: available statistics on reported closings and mergers, changing enrollment patterns, changes in key income and expenditure components, the "tuition gap" and related changes in institutional student aid subsidies, the frequency and size of reported operating

deficits, changes in plant assets and indebtedness, and the importance of institutional size. It should be noted, however, that the available data are at best incomplete. The data needed to provide conclusive evidence simply are not available in usable form at this time. For this reason, the Commission has also encouraged the development of more comprehensive kinds of financial analysis.

1. Reported Closings of Collegiate Institutions

Perhaps the only unequivocal proof of financial distress among educational institutions is their actual demise. Based on the available evidence, however, institutional demise is feared and threatened more often than it occurs. In 1972-73, there were 29 reported closings, as shown in Table 1. In addition, there were seven mergers,

Table 5-1: Openings, Closings, and Other Reported Changes in the Number of Collegiate Institutions, Academic Years 1972-73 and 1973-74

Changes	1972-73	1973-74
Openings:		
Four-year institutions	4	2
Two-year institutions	27	19
Other institutions	9	11
Closings:		
Four-year institutions	16	1
Two-year institutions	9	1
Other institutions	4	0
Mergers (four-year)	7	1
Expansion to four-year	1	5
From private to public:		
Four-year	1	1
Two-year	5	0

Source: *Chronicle of Higher Education*, September 24, 1973.

and six institutions changed from private to public ownership. At the same time, 40 new institutions were opened, more than offsetting, in the aggregate, the number of closings. There was a net loss of 12 four-year institutions and a net increase of 18 two-year colleges. In the current year, two reported closings have been greatly overshadowed by 32 openings; but, since these figures were gathered, several additional closings have been announced.

Table 2 provides another perspective on changes in the number of institutions. Beginning in 1968, the number of closings increased rapidly each year, reaching a high of 44 in 1972. Among public institutions, 35 two-year colleges were closed between 1961 and 1972. The greatest erosion, however, has taken place in the private sector. Of 136 private colleges that closed their doors between 1961 and 1972, 78 were two-year and 53 were four-year institutions. These are not negligible numbers. Should the net attrition continue at present rates for, say, the next ten years, the number of institutions in the collegiate sector would be considerably smaller. Private two-year colleges are disappearing at an annual rate of more than 7 percent while the attrition rate among private four-year institutions is about 1.5 percent.

These data are incomplete, for they say nothing of the number of institutions that may have been compelled to curtail their educational programs nor about how the quality of postsecondary education may have been changed by the closings that have occurred. Yet one conclusion is inescapable: if present trends continue for the next ten years, the number of private two-year colleges will have been reduced by 50 percent, and there could be as many as 120 fewer private four-year colleges.

2. Changes in Enrollment Patterns

The financial viability of collegiate institutions is closely linked, of course, to their ability to attract and retain students.

Table 5-2: Reported Closings of Collegiate Institutions,
by Control and Level of Institution, 1960-61
to 1971-72

Year	All Institutions*			Public			Private		
	Total	2-Yr.	4-Yr.	Total	2-Yr.	4-Yr.	Total	2-Yr.	4-Yr.
1960-61	8	7	1	1	1	-	7	6	1
1961-62	2	1	1	-	-	-	2	1	1
1962-63	-	-	-	-	-	-	-	-	-
1963-64	7	6	1	1	1	-	6	5	1
1964-65	8	7	1	4	4	-	4	3	1
1965-66	8	6	2	4	4	-	4	2	2
1966-67	9	7	2	3	3	-	6	4	2
1967-68	14	8	6	-	-	-	14	8	6
1968-69	21	10	11	1	1	-	20	9	11
1969-70	18	10	8	3	3	-	15	7	8
1970-71	32	23	9	9	9	-	23	14	9
1971-72	44	28	16	9	9	-	35	19	16

Source: U.S. Department of Health, Education and Welfare, Office
of Education, *Education Directory, Higher Education*
(Washington, D.C., in various editions through 1971-72).

*Does not include branch campuses.

Private institutions normally rely on tuition payments for the major portion of their operating income. The budgets of public institutions are linked even more closely to some measure of full-time equivalent enrollment. Thus, abrupt or large changes in enrollment have an immediate impact upon income of public institutions. During the 1960s, when

nearly all public institutions were undergoing rapid growth, it was to their benefit to tie state appropriations to enrollment. But in the 1970s, as enrollment growth has slowed and in some cases stopped altogether, the financial situation of public institutions has changed dramatically. Price inflation and salary increases continue to raise operating costs, and public as well as private institutions have frequently found themselves in a precarious financial position. If enrollments actually decline, as has also begun to occur, the problem will be compounded.

Aggregate changes in opening fall enrollments for public and private institutions are shown in Tables 3 and 4. The data in Table 3 show the slowing in enrollment growth that occurred in 1970-71 and became more pronounced in the following years. Several types of institutions in both the private and the public sectors experienced actual declines in opening fall enrollments. In the public sector, major research universities and other four-year institutions have suffered the largest enrollment losses, but other institutions have also been affected. Enrollment in public two-year colleges grew substantially between 1969 and 1972; but because of the continuing establishment of new institutions, the average growth in enrollment per institution was little more than 2 percent. In the private sector, enrollment losses have been confined largely to research universities and smaller special purpose institutions.

Information about the nature and size of enrollment changes among different types of institutions is central to assessing their financial stability. Unfortunately, opening fall enrollments, which provide only a crude indicator of what is taking place, are the only enrollment data collected by NCES (National Center for Educational Statistics) that can be related to HEGIS (Higher Education General Information Survey) financial data and other relevant institutional information. In order to estimate the full financial impact of enrollment changes, it is necessary to have an enrollment count that is directly related to tuition and fee income and that shows net gains or losses over the academic year.

Table 5-3: Mean Percentage Changes Per Institution in Opening Fall Enrollment, Collegiate Institutions, 1969-72*

Sector	1969-70	1970-71	1971-72
All Levels and Institutions:			
Public	+8.7%	+6.2%	+1.7%
Private	+2.0	+0.4	0.0
Total	+6.8	+4.6	+1.3
Undergraduates Only:			
Public	+6.1%	+4.9%	-0.2%
Private	+1.2	-0.4	-1.4

*Unless otherwise noted, the data in this and the following tables are based on unpublished HEGIS Financial Reports and supplementary calculations by NCES and Commission staff.

Table 5-4: Mean Percentage Changes Per Institution in Opening Fall Enrollment, by Carnegie Classification, 1971-72

Carnegie Classification	Public	Private
Large Research Universities	-16.6%	-8.8%
Other Research Universities	+3.9	-1.6
Large Doctorate Granting Inst's	-2.0	+2.0
Small Doctorate Granting Inst's	+0.7	-5.2
Comprehensive Colleges	+2.8	+0.7
Comprehensive Colleges - limited	+1.9	+2.3
Selective Liberal Arts Colleges	-2.6	+2.9
Other Liberal Arts Colleges	-27.8	+1.1
Two-year Colleges	+2.1	-0.4

The financial discussion of enrollment change is but a part of the information required in assessing how well postsecondary educational objectives are being achieved. Other essential information is discussed in later sections of this chapter.

3. Changes in Key Income and Expenditure Components

Because the income and expenditure structure of collegiate institutions is complex and the reporting is incomplete (and in some cases inconsistent), it is difficult to determine the precise impact of the recent financial recession in the collegiate sector. Nevertheless, some clues can be obtained from an examination of percentage changes in key income and expenditure components.

Among universities, major research institutions appear to have been hit hardest by cutbacks in public funds (see Table 5). For example, between 1970-71 and 1971-72 state appropriations per institution for public research universities declined by 13.3 percent. Income per institution from all public funds for sponsored research declined by 11.1 percent. Among all types of universities, major public research universities were the only ones that reported a drop in educational and general income and total income (13.9 percent and 18.7 percent) per institution (see Table 6). Additional data showing changes in income and expenditures per full-time equivalent student are presented in Appendix C. In general, these figures indicate that private institutions have fared somewhat better than public institutions.

Overall, 1971 and especially 1972 were very bad years for colleges and universities that depended heavily on income from state and federal agencies for research, sponsored activities, and public service. The sharp reduction of graduate fellowships (from about 37,200 to less than 25,800), the elimination of training grants, and the reduction or phasing out of programs in public health and advanced science research have been well publicized. The impact can

Table 5-5: Percentage Changes in Average Reported Income
Per Institution from Public Sources, for Selected
Carnegie Categories, 1971-72

Financing Source	Leading Research Univ.	Small PhD Granting Inst's	Compre- hensive Coll.	Other Lib- eral Arts Coll.	Two- Year Coll.
State Appropriations					
Public.....	-13.3%	4.5%	6.5%	-33.5%	7.8%
Private.....	-35.5	10.4	38.1	- 2.3	4.1
Federal Aid					
Public.....	-42.7%	56.0%	19.9%	25.7%	8.5%
Private.....	-19.2	32.3	29.5	24.1	-47.4
Sponsored Research and Other Activities*					
Public.....	-11.1%	1.1%	6.5%	61.6%	4.0%
Private.....	- 1.2	2.5	19.1	16.3	65.8
Major Public Service*					
Public.....	-43.4%	-	-22.8%	-	-46.0%
Private.....	10.3	-72.8	3.8	-36.5	44.2

Source: Special tabulations by NCES based on HEGIS Financial Reports.

Note: All percentage changes are adjusted for the number of institutions reporting a given item; in some instances the public funds may not have been reported separately; all data reflect how and what institutions report.

*Includes federal, state, local, and private.

be seen in the estimates of percentage changes reported in Table 6. Less well-known is the relative decline in the rate of increase of public financing in public institutions, even in a time of rapid inflation. However, state financing seems to have recently taken a turn for the better, increasing in 1973-74 by an average of 25 percent according to one recent report.¹⁷

Table 5-6: Percentage Changes in Educational and General Finance
Per Institution, 1969-70 and 1971-72

Institutional Type	Educational & General Income				Total Current Income			
	Public		Private		Public		Private	
	1969-70	1971-72	1969-70	1971-72	1969-70	1971-72	1969-70	1971-72
Leading Research Univ.....	11.6	-13.9	8.1	8.6	11.4	-18.7	8.2	9.3
Other Research Univ.....	15.3	6.4	1.9	6.3	15.0	8.2	4.1	6.5
Large Doctorate Granting Inst's.....	18.0	7.8	1.5	9.7	16.2	4.8	9.5	8.3
Small Doctorate Granting Inst's.....	18.0	7.1	13.8	2.3	16.4	6.1	12.8	1.9
Comprehensive Colleges....	19.2	8.1	16.0	10.6	18.0	8.4	14.4	10.0
Selective Liberal Arts Inst's.....	11.9	1.4	11.2	8.3	11.1	10.7	9.2	1.4
Other Liberal Arts Inst's.	N/A	N/A	9.3	11.2	N/A	N/A	7.4	9.7
Two-year Colleges.....	19.2	5.1	7.2	5.6	19.4	5.1	5.2	4.4

The preceding data are based on current dollar income and expenditure estimates, which do not take into account wage and price inflation. Although there exist at present no reliable measures for postsecondary education inflation, some as yet incomplete tests suggest that overall constant dollar expenditures stopped increasing during the 1960s and began to decline between 1971 and 1973.¹⁸

Changes in income and expenditures vary greatly for different types of institutions. Public research universities are alone among all categories to report declining total income per institution. From HEGIS data, it is difficult to say who fared worse, public or private colleges and universities. In the majority of the categories studied, income per institution held up better for public universities and colleges. But the public institutions often did worse in terms of per-student income and per-student expenditures for instruction. On balance, it appears that per-student expenditure growth has slowed down more in public than in private colleges and universities between 1969 and 1972.

4. The "Tuition Gap" and Related Changes in Tuition Income and Student Aid Funds

The "tuition gap" between public and private institutions—the difference between tuition charged by private colleges and universities and that charged by public institutions—has received considerable publicity recently as a result of reports issued by the Carnegie Commission and the Committee for Economic Development.¹⁹ Both reports stated that the difference between private and public tuition is growing and threatens to undermine the ability of private institutions to attract students. The solution proposed by both groups is to narrow the difference by raising tuition at public institutions; neither report explores the possibility of reducing private tuition through increased financial aid.

As Table 7 indicates, the difference in tuition charges is real. Private tuition averages three to nearly five times

Table 5-7: Average Ratio of Private to Public Tuition According to Reported Tuition Charges, by Selected Carnegie Classifications in 1969-72*

Institutional Type	1969-70	1970-71	1971-72
Large Research Universities.....	4.2	4.4	4.6
Other Research Universities.....	4.9	4.8	4.8
Large Ph.D. Granting Inst's.....	3.1	3.5	3.4
Small Ph.D. Granting Inst's.....	5.0	4.4	4.2
Comprehensive Colleges.....	4.8	3.4	3.3
Comprehensive Colleges - limited.	4.5	3.6	3.2
Selective Liberal Arts Colleges..	4.4	3.4	3.2
Other Liberal Arts Colleges.....	4.7	3.4	3.1
Two-year Colleges.....	1.6	3.0	3.5

*The figures in each column have been determined by dividing the average tuition for private institutions of each type by the average tuition for public institutions of that type. Thus, in 1971-72, tuition in private research universities was 4.6 times that in public research universities.

the tuition for public four-year colleges and universities, with significant variations among the principal types of institutions.

This public-private tuition differential is reduced considerably, however, when institutional grants to students are taken into account. The results of calculating a "net" tuition differential by deducting the total amount of institutional student grants from total tuition payments are shown in Table 8. The reduction in the tuition differential reflects the fact that, on the average, private institutions spend considerably more per student for student aid than do public institutions to help their students pay tuition.

When this analysis is taken one step further by assuming that all institutional student grants go to 25 percent of the students

Table 5-8: Average Ratio of Net Private Tuition to Net Public Tuition Reflecting Student Grant Expenditures, Selected by Carnegie Classification, 1968-72*

Institutional Type	1968-69	1969-70	1970-71	1971-72
<u>Total Enrollment</u>				
Large Research Univ.....	3.6	3.3	3.3	3.5
Other Research Univ.....	4.5	4.0	3.6	3.9
Large Ph.D. Granting Inst's	2.7	2.6	2.5	2.5
Small Ph.D. Granting Inst's	4.2	4.0	3.8	3.8
Comprehensive Colleges.....	4.5	4.3	4.4	4.4
Comp. Colleges - limited...	3.6	3.0	2.7	2.9
Selective Liberal Arts Coll.	2.0	2.0	2.1	2.2
Other Liberal Arts Colleges	4.2	5.2	5.1	3.8
Two-year Colleges.....	5.3	5.0	5.0	4.8
<u>Assuming 25% of Enrollment Receiving Grants</u>				
Large Research Univ.....	3.2	2.9	2.8	3.6
Other Research Univ.....	4.4	3.3	3.1	3.3
Large Ph.D. Granting Inst's	2.5	2.5	2.4	2.8
Small Ph.D. Granting Inst's	4.5	4.5	4.5	7.6
Comprehensive Colleges.....	4.5	4.0	4.3	4.2
Comp. Colleges - limited...	2.0	1.9	1.8	2.6
Selective Liberal Arts Coll.	1.6	1.5	1.6	1.6
Other Liberal Arts Colleges	3.4	4.2	4.0	3.5
Two-year Colleges.....	5.0	4.7	4.9	4.8

*See note to Table 7.

enrolled (in practice the percentage normally ranges from 15 to 40 percent, with many instances above 50 percent), there is an even more noticeable reduction in the tuition differential for those students. It may be very misleading, therefore, to speak of the

"tuition gap" as if it affected all students equally. The greater availability of student aid among private institutions means that the effective tuition differential is considerably less for low-income students than for high-income students. The one noticeable exception occurs among two-year colleges, where the greater availability of student aid at public institutions apparently increases the gap between public and private tuition; and the increase is not significantly affected by the distribution of aid.

The figures in Table 9 show that public institutions in some categories have gained relative to private institutions in the amount of student aid funds they administer. Private institutions continued in 1971-72 to spend 1.6 to 3.5 times as much for student aid as their public counterparts.

Unfortunately, while institutions report the aid they provide students, much aid going directly to students—such as state scholarships and grants and loans—is not often reported by source.

Table 5-9: Ratio of Average Grants Per FTE, Private to Public Institutions, by Carnegie Classification, 1968-72

Institutional Type	1968-69	1969-70	1970-71	1971-72
Large Research Universities	3.8	3.6	3.3	3.5
Other Research Universities	2.6	3.0	2.6	2.8
Large Ph.D. Granting Inst's	1.9	1.7	1.7	1.6
Small Ph.D. Granting Inst's	2.5	2.7	2.3	1.8
Comprehensive Colleges	2.5	2.3	2.4	2.3
Comprehensive Coll. - limited	2.1	2.2	2.3	2.1
Selective Liberal Arts Coll.	-	-	-	-
Other Liberal Arts Colleges	2.4	2.2	2.7	2.2
Two-Year Colleges	2.9	3.1	2.5	2.9

If such aid directly to students were taken into account, however, the position of the private institutions would again show a marked improvement, for approximately 60 percent of such aid goes to students who attend private institutions; such students constitute only about 24 percent of all students in collegiate institutions.²⁰

If the competition for students increases, as it seems certain to do, price competition (involving tuition charges, waivers, and student aid) between public and private institutions is also likely to increase. Student grants are already among the fastest (and in some cases *the* fastest) growing item of institutional expense, largely because of efforts to increase access for low-income and minority students. There is every reason to believe that, in response to growing enrollment and price competition, this growth will continue.

An important consequence of this competition has been that many colleges and universities, public and private, now report expenditures for student grants well in excess of income for student aid. When reported income and expenditures for student grants in 1971-72 are compared, student grant deficits as a percentage of student grant expenditures (Table 10) amounted to 30 percent for public institutions and 41 percent for private institutions on an FTE basis. In the aggregate, these deficits amount to substantial sums of money, and these sums have more than doubled between 1968-69 and 1971-72 (Table 11). It also appears that these deficits have grown faster for public than for private institutions.

Inasmuch as public institutions are not permitted to incur actual deficits when all funds are taken into account, it is evident that, at least in the case of public institutions, these apparent deficits are being financed from some other institutional funds. Yet the meaning is clear for public as well as private institutions: the rising demand for student aid has put severe pressures on institutional budgets

Table 5-10: Student Aid Deficits as a Percentage of Student Aid Expenditures, 1969-72

Institutional Type	1969	1970	1971	1972
<u>Total Deficit/Expenditure</u>				
Public Institutions	20%	24%	26%	32%
Private Institutions	38	41	44	30
All Institutions	30	33	35	31
<u>Total Deficit/Expenditure per Full-time Equivalent Student</u>				
Public Institutions	18%	22%	25%	30%
Private Institutions	34	38	41	41
All Institutions	29	31	33	35

Table 5-11: Aggregate Differences Between Reported Student Aid Income and Expenditures for Public and Private Institutions, 1968-72
(In millions)

Fiscal Year	HEGIS Financial Reports			AAUP Survey*	
	Public	Private	Total	Public	Private
1968-69	\$73.2	\$166.9	\$242.3	\$18.9	\$124.8
1969-70	107.7	215.5	325.4	29.4	165.9
1970-71	137.3	251.9	389.2	80.6	207.6
1971-72	204.0	271.1	475.2	109.5	225.4

Note: See Appendix C for additional data.

*The "AAUP" figures include only those institutions reporting faculty compensation data to the American Association of University Professors; this represents roughly half of the HEGIS sample.

and is likely to continue to do so throughout this decade, unless there are major changes in the financing of student aid.

Student aid grants, while reported by institutions as expenditures, are in fact forgone income or selective price discounts. The majority of such discounts, in private institutions, at least, are said to be based on student financial need. Each institution will thus charge several hundred (in some instances several thousand) different net prices. By bringing effective student charges within the affordable range of many students, these discounts and the ensuing deficits have given access and freedom of choice to unprecedented numbers of students. Studies of enrollment by levels of student or parental income show that, on the whole, there is no significant difference, in this respect, between the enrollment patterns of public and private institutions.²¹ Grants to students from institutions may play a major part in helping achieve this enhanced access and freedom of choice.

As long as enrollments were rising, student aid deficits and the price discounts from which they stemmed appeared to reflect not only a desirable social policy but also good management. Price discounts were and are used to attract to each institution the desired number of students in the preferred social, economic, and cultural mix so as to produce the maximum amount of income in tuition and other fees. Now, however, institutions are under strong pressure to continue increasing their discounts, but they can no longer be assured of attracting enough students to generate the budgeted level of income for current expenses and student aid. The potential result is a cost-price gap of serious proportions.

Given the present competition among collegiate institutions for students, institutions may continue to use student aid funds and other unrestricted funds to discount the advertised tuition (price) in order to attract students to their institutions. This discounting continues to be a potential cause of financial distress. To the extent that institutions attempt to cover the costs of this discounting by increasing the advertised tuition to all students, the tuition charges for students who are not grant recipients have become inflated.

This kind of price differential has worked so far because the students who can afford and are willing to pay the advertised tuition of high-priced institutions do not seem to be greatly influenced in their choice of institutions by tuition levels. But institutions—particularly private colleges and universities—are reluctant to risk losing such students by rapid increases in their tuition and therefore frequently suffer the annual deficits indicated in Tables 10 and 11.

To summarize, the much publicized "tuition gap" is real, but its significance is greatest for those students who, because of their family income, are not eligible for grants or scholarships. It is probable that the tuition gap does not exist for students in the lowest income group, who receive a large share of the grants and other aid for tuition costs. Still, the effort to reduce the tuition differential has created a fundamental imbalance that, in view of current enrollment forecasts, threatens the financial viability of many private institutions. Most private institutions are now offering larger price discounts than they can continue to afford, particularly as enrollments begin to decline.

5. Operating Deficits, Changes in Plant Assets, and Growth of Plant Debt

Operating deficits are a crude and often misleading measure of financial success or failure in collegiate institutions.²² Nevertheless, persistent reports of deficits are not to be taken lightly. Between 1969 and 1972, both the frequency and size of operating deficits increased. And substantial operating deficits were reported by public institutions, once a far more unusual occurrence than in the private sector.* The summaries in Tables 12 and 13 provide a minimum estimate of aggregate net operating deficits for specific groups

*The term "deficit" is used here to indicate an excess of reported general fund expenditures compared with general fund income.

of institutions. By 1972, net deficits for all institutional groups had declined in the private sector, but they continued to be relatively high for public institutions. The figures in Table 12 do not provide a complete picture of the actual number and size of operating deficits, but they suggest that 1970 and 1971 were bad years for private institutions and that all four years may have been difficult for public colleges and universities. (Table 13 provides more detailed information.)

In a sample of 97 public and private institutions studied by the Commission's staff, the group as a whole reported a deficit every year between 1969 and 1972. At the same time, total fund balances increased by more than \$1.1 billion. Among this group of institutions, 49 liberal arts colleges reported aggregate annual net deficits totaling \$7,931,000 for the entire period, while their

Table 5-12: Net Operating Deficits in Collegiate Institutions, 1968-72*

(In thousands of dollars)

Year	NEGIS Financial Reports		AAUP Survey**	
	Institutions Net Deficit		Institutions Net Deficit	
1968-69	54 public	\$83,505	70 public	\$103,406
	26 private	3,470	181 private	13,359
1969-70	25 public	20,423	84 public	191,092
	478 private	67,183	482 private	56,196
1970-71	67 public	122,703	178 public	120,088
	467 private	99,185	359 private	74,430
1971-72	70 public	111,254	94 public	157,689
	29 private	1,735	55 private	31,845

*Aggregates include institutions reporting surpluses.

**See note to Table 11.

Table 5-13: Operating Deficits Reported by Collegiate Institutions, by Institutional Type, 1971-72

Institutional Type	Public		Private	
	No. Inst's Reporting Deficits	Total Deficit for Group (In thousands)	No. Inst's Reporting Deficits	Total Deficit for Group (In thousands)
Leading Research Univ.....	1	\$89	9	\$29,779
Other Research Univ.....	5	7,640	7	9,507
Large Doctorate Granting Inst's.....	2	1,849	3	1,200
Small Doctorate Granting Inst's.....	2	1,696	4	3,562
Subtotal.....	10	\$11,274	23	\$44,048
Comprehensive Colleges....	29	\$15,764	30	\$12,199
Comprehensive Colleges (limited).....	23	5,959	9	1,495
Subtotal.....	52	\$21,723	39	\$13,694
Selective Liberal Arts Inst's.....	-	-	38	\$13,097
Other Liberal Arts Inst's.	4	\$208	189	26,489
Subtotal.....	4	\$208	227	\$39,586
Two-year Colleges.....	177	\$33,703	94	\$7,945
Divinity Schools.....	-	-	80	5,304
Medical Schools.....	3	4,032	5	2,439
All Other.....	3	129	51	6,987
Total.....	248	\$71,069	519	\$120,003

total fund balances grew by more than \$77 million. Of the 49 institutions, only 5 reported both annual operating deficits and consistently declining total fund balances. In terms of overall changes in net assets, these 5 colleges could be said to be in financial trouble, whereas the others require further analysis before any conclusions can be drawn.

Changes in institutional assets and liabilities (such as plant and endowment assets, plant and other debt, and reserves, if any) make up another important set of indicators of institutional financial health. Some changes in assets may increase operating expenditures; others may increase future revenues. Even though the following data are fragmentary and based upon small samples, they may shed additional light on the financial condition of educational institutions.

The deficits reported by private colleges and universities represent in most instances a larger percentage of total current expenditures than those reported by public institutions. For instance, as shown in Table 14, the figures are 2.7 and 2.5 percent for public comprehensive colleges and 3.5 and 4.6 percent for private comprehensive colleges.

Throughout the 1960s, college and university plant assets increased spectacularly. Now the building boom in postsecondary education seems to be over, but building cost inflation continues to require large sums of capital for the declining volume of construction. Between 1969 and 1972, aggregate net plant asset growth has been \$12.5 billion. This kind of growth may have added in excess of \$600 million to annual operating expenditures (not counting debt service). The summary in Table 15 gives a rough idea of the annual changes that have taken place. (See Table 16, also.)

Colleges and universities normally do not include charges for depreciation of plant and equipment as a cost of current operations. Equipment replacement and renovations, if not funded out of current income, must be financed from outside sources. One consequence of

Table 5-14: Operating Deficits as a Percentage of
Total Current Expenditures, 1971-72

Institutional Type	Public	Private
Leading Research Universities..	3.6%	2.6%
Other Research Universities....	.5	2.8
Large Doctorate Granting Inst's	1.7	1.6
Small Doctorate Granting Inst's	1.5	3.5
Comprehensive Colleges.....	2.7	3.5
Comprehensive Colleges (ltd)...	2.5	4.6
Selective Liberal Arts Inst's..	-	6.4
Other Liberal Arts Inst's.....	.9	6.1
Two-year Colleges.....	5.4	9.1
Divinity Schools.....	-	7.3
Medical Schools.....	1.8	2.4
All Other.....	1.2	6.2

Note: See Appendix C for additional data.

this practice has been a perennial lack of capital to take care of major plant renovation and expensive equipment replacement. The absence of reserves for these purposes is a fundamental weakness in higher education finance and poses a serious long-range problem in all but the few institutions that do maintain depreciation reserves or are wealthy enough to have capital when they need it. Table 17 shows the estimated annual addition to depreciation reserves that collegiate institutions should be accumulating just to pay for new plants and equipment. The cumulative effect of these annual increments represents a major future capital requirement that will certainly have significance for the financial viability of many collegiate institutions.

Along with plant assets, plant debt has also increased during the period studied. At the end of 1972, the cumulative net indebtedness for college and university plants was approximately \$10.2 billion. Thus, roughly 20 percent of total net plant assets are

Table 5-15: Changes in Aggregate Plant (Land, Plant, and Equipment) Assets, 1970-72

(In millions)

Year	All Institutions*		Public		Private	
	Total	New	Total	New	Total	New
1969-70	\$41,685	\$4,168	\$25,975	\$2,880	\$15,279	\$1,227
1970-71	46,098	4,170	27,834	3,037	16,482	1,133
1971-72	49,957	4,208	32,253	3,095	17,700	1,112

*In this and several of the following tables, the total for all institutions will differ slightly from the sum of public and private institutions because of rounding—and because the first two columns are based on data from a source different from the other columns.

Table 5-16: Reported Operations and Maintenance Expenditures for Plant* as Percentage of Total Net Plant Assets, 1970-72

Year	HEGIS Financial Reports			AAUP Classification	
	Total	Public	Private	Public	Private
1969-70	3.7%	3.8%	3.5%	4.7%	4.6%
1970-71	3.8	4.1	3.6	4.8	4.6
1971-72	3.9	4.0	3.7	4.8	4.6

Note: Although these percentage figures would be more meaningful if all plant maintenance expenditures were used, exclusive of debt service, the series is very stable from year to year even when calculated by type of institution.

*Normally excludes auxiliary enterprise plant.

**See note to Table 11.

Table 5-17: Estimated Capital Requirement for Additions to
Plant and Equipment Resulting Only from
Depreciation of New Assets Acquired in 1971-72*
(In millions)

Year	Total**		Public		Private	
Approximate Depreciation Rate*	4.7%	2.7%	4.8%	2.4%	4.6%	2.3%
1969-70	\$197	\$113	\$137	\$67	\$57	\$28
1970-71	198	115	146	71	42	26
1971-72	200	115	152	73	51	25

*Straight-line" depreciation method. The smaller of the two annual estimates for depreciation in each case excludes new land.

**See note to Table 15.

being financed by borrowing. New plant debt reported for the three years amounted to \$3.3 billion and represents about 26 percent of new plant assets. Simultaneously, institutions have found it necessary to increase the average length of time for debt repayment. Public institutions tend to take longer to pay off their plant debt than do private colleges and universities. Present estimates of the length of payoff reflect, in part, the timing of recent construction; overall, public four-year institutions have built into their expenditure structure an average 24-year debt liquidation fixed cost. Table 18 provides additional details.

6. Other Activities Causing Potential Financial Trouble

In addition to their strictly educational activities, postsecondary educational institutions report income and expenditures for a series of other essential activities and programs. These include sponsored research, public services, and auxiliary enterprises.

Table 5-18: Growth of Plant Debt, 1969-72

(In millions)

Year	Plant Debt		Public		Private	
	Total	New	Total	New	Total	New
1969-70	\$9,225	\$1,101	\$6,033	\$575	\$3,635	\$511
1970-71	9,826	1,210	5,979	721	3,846	488
1971-72	10,187	1,062	6,033	575	4,154	486
Years to complete payoff (straight-line)						
1969-70	15.7 years		15.5 years		16.3 years	
1970-71	14.8		16.2		12.9	
1971-72	17.9		18.8		16.7	

Among the various public services, hospitals present a special problem for universities operating medical schools and other health research and training programs. Often, hospitals represent a drain on institutional resources. When certain public health programs are suddenly phased out, as is the case in the President's 1973-74 Budget, the loss of institutional support can and does create a serious financial problem for those institutions.

To determine how much financial distress may in fact be caused by hospital services requires more detailed analysis than data provided by the Higher Education General Information Survey permit. The problem of assessing the impact of changes in financing policies may simply reflect, in part, the limitations of current accounting or reporting procedures. Moreover, summary figures tell nothing about curtailed services. But the data in Table 19 show that public institutions seem to fare less well in strictly financial terms than private universities with regard to hospitals operated in conjunction with medical schools.

Table 5-19: Hospital Operating Deficits, Net Aggregates Per Institution, by Carnegie Classification, 1969-72
(In thousands)

Year	Leading Research Univ's	Other Research Univ's	Large Ph.D. Granting Inst's	Small Ph.D. Granting Inst's	Comprehensive Colleges	Comp. Colleges Limited	Medical Schools
Public Institutions:							
1969	+92	-476	-176	0	+7	+153	-4,242
1970	-924	-373	-82	-10	-10	0	-1,053
1971	-125	-109	-1	-4	+193	0	-1,498
1972	-195	-103	-1	0	-231	+239	-1,159
Private Institutions:							
1969	-67	-53	-50	0	0	0	-13
1970	-67	+80	-287	0	-3	0	-96
1971	-11	+187	+10	0	-3	0	+362
1972	-31	+463	+2	0	-5	0	+584

Another major cause of financial problems, if not outright financial distress, among educational institutions has been the rapid and dramatic shift in important public policies during recent years.²³ For example, when abrupt and sizeable budget reductions are forced upon educational institutions because of the elimination of a major public program—such as the phasing out of federal institutional support for public health education and training—it may be inevitable that financial distress will be a direct consequence.²⁴ Often, institutions are forced to respond to such changes in financing by drawing support from other educational services and programs. Appropriate procedures for the phasing out of affected activities should be a part of

public policy and institutional procedures to help maintain reasonable institutional stability. In the absence of such procedures and policies, it should be of little surprise that serious financial difficulties are created.

During recent years, educational institutions have made considerable progress in adopting both long- and short-range planning, developing improved budget controls, and achieving a general managerial upgrading.²⁵ Nevertheless, the institutions are still subject to a planning cycle that greatly restricts their ability to respond quickly to abrupt changes in financial support. The institutional planning cycle is influenced by numerous factors, but the academic calendar and prevailing governance structures are among the important ones.

The need for a relatively long-planning horizon is inescapable. Once a budget is approved, cutbacks from one academic term to the next will tend to be relatively small. When personnel reductions are called for, particularly in the teaching staffs, collegiate institutions usually require 12 to 24 months to make the necessary adjustments. Students and parents also need to plan ahead.

Public officials must recognize the dilemma presented by two major factors in policy making: the institution's need for early information on policy and program changes as well as the cycle and calendars of decision and budget making. Public priorities change from time to time, but the state and federal governments, with their immense stake in postsecondary educational institutions as national and regional resources, must temper their actions in favor of providing greater stability to the educational enterprise as a whole. Otherwise, uncertainty and instability will continue to breed serious financial disorders.

Developing a Capability for Financial Distress Analysis

As noted at the beginning of this chapter, financial distress in postsecondary educational institutions is of public concern, in the Commission's opinion, when a lack of resources prevents the

institutions from achieving those of their goals that coincide with and reinforce the fulfillment of public postsecondary educational objectives. Since postsecondary institutions are complex entities with multiple objectives, quantitative measures tell only a part of the story about financial distress. Qualitative and intangible factors are also key ingredients in an analysis of financial distress. Economies in budgeting, program cutbacks, and purposeful limitation of peripheral institutional activities can be important steps toward more effective resource utilization and greater financial stability. But the question is, what is essential and what is redundant activity? And who is to say so? By cutting back their activities and programs, institutions are often able to improve their financial status; but in doing so, they must make choices that may have a significant impact on the achievement of important objectives.

Currently, there is no working consensus about the basic requirements for distress analysis or the key indicators, financial and non-financial, of serious financial distress in postsecondary education. Thus, if distress analysis is to become a useful tool for policy making, it is necessary to attempt to identify those indicators and develop the analytical requirements.

The following kinds of indicators of financial status—that point up conditions, within postsecondary education as a whole or within segments of the enterprise, preventing the desired degree of achievement of objectives—must be developed:

1. Indicators of institutional financial status;
2. General enterprise-wide indicators;
3. Indicators of external conditions.

The development of enterprise-wide indicators of financial status requires collecting institutional indicators that record changes over an extended period of time. There is nothing fundamentally new in this; in an informal manner, institutional evaluation has been proceeding along such lines for many decades. What has been lacking is the deliberate collection and analysis of the requisite data elements. Within

the framework of the Advanced Institutional Development program (Title III, Higher Education Act of 1965, as amended), however, as well as in some private foundation evaluations of colleges and universities, similar statistical evaluations are now in progress or under development. With these indicators, an institution's financial status--its financial health or distress--could be determined.

Indicators of Changing Institutional Financial Status

The specific indicators and types of data listed below are intended to be illustrative of what is needed. The list is not final and complete, but preliminary and partial.

1. Indicators Based on Institutional Data

Most of the following indicators pertain to basic institutional information central to management decision making. Much of this information is already available on each campus; where it is not, there is a strong presumption that management decisions are less than fully informed.

a. Program and budget information

Of all the indicators of institutional financial status, data pertaining to changes in programs and activities and, therefore, to changes in budgets are among the most crucial and, at present, the least available on a national scale. An essential requirement is to translate changes in budgets into changes of activities. Some of the principal data requirements in this area are: changes in major operating and capital budget components (preferably in program budget format); changes in employee-to-services-rendered ratios (student/faculty and student/administrator ratios); changes in key ratios pertaining to physical plant utilization,

maintenance, and replacement; and changes in major programs such as research, public services, library acquisitions, and computer usage.

b. Enrollment and student data

Information concerning the composition and size of enrollment is central to assessing how well institutions succeed in achieving their goals. Among other data, it is useful to know the following: full-time equivalent enrollment, including the rate of attrition within the academic year; first-time students and their characteristics (high school rank, test scores, economic and cultural variables); the student aid mix, by type of student; ratios of applications to admissions, and of both of these to new fall enrollment; and, for returning students, the length of time needed to complete desired programs and a few measures of their performance or academic achievement. Since students may have objectives other than those assumed by the institution, it might also be fruitful to test from time to time the students' perception of what the institutions' objectives are and to what extent they are achieved.

c. Financial data and related statistics

In recent months, there have been several developments pointing to a growing interest on the part of institutional managers and other analysts in refining the data requirements for financial analysis of educational institutions. The indicators listed here include several that have been suggested during recent conferences on the subject and in recent studies of financial distress. They are: income and expenditure data in the aggregate by major components and on a mean per-institution and per-student basis; appropriate cost of "production" time series; the financial structure of student aid, projected forward, disclosing encumbrances implied in

the current structure; net cash flow generated after student-aid expenditures, including a projection of implied future commitment; assessment of the liquidity position of the institution; assessment of how well short- and long-term debt is secured; hypothetical or actual plant and equipment depreciation or replacement targets projecting future fund requirements (an industry yardstick needs to be developed); changes in reserves and debt-to-asset ratios; changes in endowment investment return and in the market value of endowment; changes in debt service costs and ratios of debt service expenditures to appropriate asset and expenditure components.

d. Quality of institutional management

Undoubtedly, this is a difficult area; but the question of managerial quality is posed frequently, and there are indicators of it, however superficial they may be. Among them are:

- (1) Academic quality and quality of general administration;
- (2) Quality of governing board; and
- (3) Quality of financial management.

2. General Enterprise-wide Indicators

Postsecondary education is one of the few major industries without formal price and cost index information specifically tailored to institutional and consumer needs. Also missing are timely periodic employment and wage statistics, other than faculty salary and compensation data; and current data on the aggregate flow of funds into and out of institutions, segments of the industry, and the industry as a whole. Three principal types of indicators would be very useful:

a. Price index for institutions of postsecondary education

Patterned after the Consumer's Price Index or the Wholesale Price Index, this index would trace price movements for the

basic expenditure components of educational institutions over an extended period. Since as much as 60 percent of institutional expenditure is for personal compensation, it may be important to distinguish between wages on the one hand and prices on the other. Such an index would allow institutions and policy makers to identify factors strongly affected by price inflation, and it would help distinguish between unit cost changes in plant maintenance, food service, office supplies, and the like. Over time, it would also provide information on the evolving structure of institutional expenditures.

b. Price index for capital expenditures of institutions

This index would be similar to the F.W. Dodge Corporation's Construction Cost Index, but go beyond this by distinguishing between plant construction costs and equipment purchases and rental that are peculiar to educational endeavors.

c. Price index for consumers of educational services

This would be an index for students, tracing price movements over time for tuition, room and board charges, book and supply costs, and other standard living costs.

3. Indicators of External Conditions

Normally, these are factors over which an institution has no control and to which management must adjust, for better or worse. Among the most conspicuous external indicators would be:

a. General economic indicators

These would include variables normally consulted if one tries to determine the state of health of the general economy. In addition, special attention should be given to those forces that affect the income flows of educational institutions (changes in the flow of public funds, factors influencing philanthropy, and the movement of the money and securities markets).

b. Postsecondary education public policy indicators

At least four types of changes might be monitored in a formal and continuous manner: changes in legislation and appropriations affecting the flow of public funds into postsecondary education; changes in administrative interpretations, regulations, and procedures affecting the flow of public funds; changes in judicial rulings affecting the flow of funds and operating costs of institutions; and changes in the price of resources that produce changes in the cost of operating specific public programs.

c. General demographic indicators

These would consist of appropriate short- and long-range projections of population age groups of significance in projecting postsecondary enrollment.

As noted earlier, there are few, if any, items in this list that are not now being taken into account by institutional managers and by other investigators. What are missing, however, are these: (1) a consensus that these are, indeed, key indicators to monitor; (2) a systematic and nationwide effort to collect, interpret, and disseminate the relevant information; and (3) adequate funding for the statistical and analytic effort required. Those who worry about the increased administrative costs implied in this suggested analysis might do well to ask themselves how large a percentage of institutional funds is now being invested in what in other enterprises would be called "research and development." In the collegiate sector, the percentage is very small, if research and development means investments for the improvement of the enterprise's own product and management, rather than for the improvement of other organizations and industries.

Conclusions

1. There is no generally accepted definition of financial distress used in the postsecondary education enterprise. For the purposes of the Commission's analysis, however,

"financial distress would exist in the postsecondary education enterprise or in one of its major sectors when the lack of money and other resources prevented the desired degree of achievement of national postsecondary objectives."

2. No generally-accepted standards or uniform criteria are available to ascertain the existence or extent of financial distress among institutions of postsecondary education.
3. The Commission concludes that an evaluation of financial distress in postsecondary education should incorporate at least three sets of indicators: factors concerning institutional financial status, factors related to the financing of the total postsecondary education enterprise, and factors external to postsecondary education.
4. Based on the analysis of selected statistical evidence, the financial status of the postsecondary education *enterprise* is not substantially jeopardizing the achievement of postsecondary education objectives. Some postsecondary *institutions*, however, are already in financial distress, and, if present patterns and conditions of financing continue, there is a high probability that such distress will occur in several *sectors* of postsecondary education as well.

Recommendations

1. National standard indicators should be developed to determine the relative financial status of the different types of postsecondary educational institutions. The Commission report suggests a number of such indicators for consideration.
2. When there are substantial shifts in public financing of specific programs, they should be effected over a reasonable period

of time. Appropriating federal funds for all education programs one year in advance of spending would be especially helpful.

3. The programmatic interrelationships among research programs, graduate education, and undergraduate education should be studied so as to better understand the induced financial effects of individual program financing decisions on an institution.
4. Grants and contracts with institutions of postsecondary education either should include long-term programmatic support that recognizes the interrelationships among the various functions of the institution or should cover the full costs associated with purchasing the service as if it were provided separately from other functions within the institution.

CHAPTER 6

A FRAMEWORK FOR ANALYZING NATIONAL POLICIES FOR FINANCING POSTSECONDARY EDUCATION

A FRAMEWORK FOR ANALYZING NATIONAL POLICIES
FOR FINANCING POSTSECONDARY EDUCATION

The arrangements for financing postsecondary education in the United States, as may be evident from the preceding chapters, are complex and intricate. Funds flow to students, institutions, and programs from a multitude of federal, state, local, and private sources. Each major financing stream consists of a variety of financing mechanisms made up of a host of financing programs characterized by particular sets of objectives, conditions, criteria, and methods. In Chapter 3, we attempted to sort out these arrangements and to group them in a way that makes it possible to see the financing system as a whole; but, in doing so, we had to gloss over a great many details that are essential to an understanding of the individual financing programs.

Thus, it is evident that those who would propose changes in the existing pattern of financial support for postsecondary education to achieve certain public or private goals are beset with very difficult problems. Any single policy change, such as an increase in federal grants to undergraduate students, may have many consequences for students and institutions that are not easily foreseen. Or a new policy may have little or no impact whatsoever because of offsetting changes elsewhere in the financing system. Too often, new programs are proposed by groups that have a certain philosophical bent and want to effect a particular change but have little way of knowing what their proposal will in fact accomplish.

The problem is compounded when policy makers attempt to design a federal financing policy that will accomplish a series of pre-determined objectives, such as those outlined in Chapter 2. There is little value, for example, in drawing up a program of federal student aid intended to expand enrollment rapidly among low-income students without also ensuring that the institutions can accommodate the additional students and that other public and private aid will be maintained. Nor is there anything to be gained by proposing that large sums be spent to encourage diversity if there are strong countervailing forces that effectively preclude real diversity.

This is not to say that there should be no changes in current patterns of financing until all the consequences of any proposed change are totally understood. It is axiomatic that public policy must often be made on the basis of imperfect knowledge. No major policy decisions would be possible if they were to be made only with a perfect understanding of all the consequences for all the parties affected, and public policy regarding postsecondary education is no exception. Nevertheless, it is reasonable to assume that, with the great quantity of data on postsecondary education that is now available, the basis upon which policy decisions are made can be substantially strengthened by rigorous application of research and analysis. This is, indeed, the principal premise upon which this Commission has based its work. Rather than concentrating its efforts upon developing a specific set of financing recommendations for Congress, the President, and the states, it has devoted a large part of its energies to developing a framework for analyzing policy for the financing of postsecondary education. Such a framework can be useful for considering and developing specific proposals for changing current financing patterns.

It is no simple matter to sort out the complex financing arrangements for postsecondary education and to make adjustments in national policies to bring about specific results. It is possible, however, to

organize our thinking about postsecondary education so that the essential issues may be addressed in a systematic manner. This systematic process for considering major variables and the appropriate data is what we define as a framework for policy analysis. This chapter provides an outline for such a framework, building on what has been presented in the preceding chapters. In the next chapter, this framework is employed to analyze a series of policy alternatives for financing postsecondary education and to demonstrate the utility of this type of analytical approach.

Building an Analytical Framework

There are several elements in the analytical framework developed by the Commission. They deal with these ten questions regarding any proposed financing plan:

1. What are the basic objectives to be achieved?
2. What criteria should be used to determine achievement of the objectives?
3. What assumptions (quantitative and qualitative) should be made about changes in society and in the institutions themselves that will affect the accomplishment of the objectives?
4. What general policies incorporating priorities among specific targets for the objectives should be adopted?
5. What financing mechanisms most effectively serve the general policies?
6. What specific financing programs most effectively implement the financing mechanisms?
7. What are the relevant data regarding students, institutions, and programs?
8. What are the important interrelationships between changes in financing and the responses of students, institutions, and sources of financing?

9. What measurements should be employed to describe the extent to which alternative financing policies and mechanisms serve the chosen objectives?
10. What special judgments should be made to condition acceptance of any proposed set of financing mechanisms and programs?

The selection of objectives, criteria, and policies is largely judgmental and, therefore, primarily the responsibility of policy advocates and policy makers. The selection of financing mechanisms requires a mixture of judgment and technical knowledge. Determining the details of financing programs, preparing a data base, estimating interrelationships, and developing a set of measurements of the impact of alternative financing programs are largely the responsibility of those with technical knowledge in such matters.

The remainder of this chapter will be devoted to a more detailed discussion of these ten elements.

Objectives and Criteria

The national objectives selected by this Commission and possible criteria for measurement are outlined in Chapter 2. In general, they describe the Commission's views on the desired character of the postsecondary education enterprise. Such objectives may be expressed in terms of purpose, substance, or character. The Commission believes, however, that the purpose and substance of postsecondary education are matters of individual policy maker and institutional choice rather than national direction. Thus, the Commission has selected a set of national objectives that describe, from a national perspective, the desired character of the postsecondary educational enterprise. Implicit in the Commission's objectives for postsecondary education is the nurturing of a diverse and flexible enterprise that is accessible to every individual who is capable of profiting in significant measure from such education.

Assumptions

To analyze the potential results of any particular financing plan for postsecondary education, it is necessary to agree upon some basic assumptions about important factors within and without the postsecondary education enterprise. Not only do institutions operate in a changing social environment, but they also undergo significant changes themselves. In developing a financing pattern, changes of both kinds must be taken into account to ensure an optimum level of achievement of the objectives. In the Commission's view, the conditions described in Chapter 1 are among the most important for the financing of postsecondary education. They concern projected enrollment, costs, productivity, the evolution of educational programs, student responses to price changes, federal financing policies, state financing decisions, and a number of other factors. Quantifiable assumptions, such as those regarding enrollment, can be taken into account explicitly in projecting the probable consequences of choosing one financing plan over another. Those that are not quantifiable, such as student demands for curricular changes, may not play a part in the quantitative projections but should be taken into account so far as possible in the judgmental review of proposed financing plans.

General Policies

The policies chosen to achieve any set of objectives may be stated in general terms—for example, to reduce tuition for low-income students, to narrow the tuition gap between public and private institutions, or to increase federal support for research—or they may be expressed in some detail. In certain cases, there may be several alternative policies that will have much the same impact on achieving a particular objective. In such cases, it is important to consider the possible consequences, positive or negative, that adoption of each policy will have upon the achievement of other objectives. In the following chapter, we present

and analyze a number of alternative financing policies in terms of their effects upon the objectives identified by the Commission.

Among the principal issues addressed by a general policy are the following:

1. What share of the cost of education should be borne by students in each type of institution through tuition and other fees?
2. What share of the cost should be borne by the other major sources of financial support?
3. Should the share of the cost of education borne by each major source be different for different levels (such as in the collegiate sector's lower division, upper division, and graduate levels)?
4. What kinds of activities should the federal government support?
5. What kinds of activities should the state and local governments support?

Financing Mechanisms

Once a general financing policy designed to accomplish one or more objectives has been selected, it is then necessary to decide which financing mechanism or mechanisms will most effectively carry out this policy. A financing mechanism consists of two factors: (a) the means by which assistance is delivered (such as loans or grants) and (b) the recipient of assistance (such as students, institutions, or parents).

To help policy makers consider alternative policy mechanisms, a vocabulary or taxonomy of different means of delivery of funds and different recipients of funds can be very useful in developing a language for public policy planning. For its own policy analysis, the Commission developed the taxonomies of delivery methods and recipients that are discussed below.

The two principal recipients of aid are institutions and students. The taxonomy below arrays the means of assistance according to these recipients. (A taxonomy according to recipients may be found on page 238.)

I. Aid to Institutions

A. General institutional aid

1. Tuition and fee payments
2. Budget appropriations
3. Lump sum grants
4. Various types of capitation grants
5. Grants based on other units of workload or output
6. Employment subsidies
7. Unrestricted gifts
8. Unrestricted earnings

B. Categorical aid (current)

1. Program support
2. Project grants and contracts
3. Service contracts
4. Restricted gifts
5. Restricted earnings

C. Construction aid

1. Project grants
2. Direct and indirect interest subsidies
3. Gifts
4. User charges

D. Tax benefits

1. Tax exemptions for institutions
2. Tax credits for donors
3. Tax deductions for donors

E. Other institutional aid

1. In-kind gifts
2. Use of property, facilities,
or equipment
3. Cooperative services

II. Aid to Students

A. Grants and scholarships

1. Aid distributed directly to students
based on:
 - a. Need
 - b. Ability
 - c. Special purposes
 - d. Income
2. Aid distributed through institutions based on:
 - a. Need
 - b. Ability
 - c. Special purposes
 - d. Income

B. Loans (subsidized portion)

1. Direct loans
2. Guaranteed loans
3. Institutional loans
4. Tuition deferrals

C. Tax benefits

1. Tax credits for families or students
2. Tax deductions for families or students

Many of these financing mechanisms may be used by more than one source of financing. Federal agencies, state and local governments, and private corporations, for example, may make categorical grants to institutions. Certain financing mechanisms may be identified with a single financing source or a recipient. For example, various forms of tax benefits may be granted only by government.

It should also be noted that if institutions, for purposes of the analysis, are considered as the final recipients of funds, then student financial aid used for tuition and fees must be seen to pass through students to the institutions in which they are enrolled, thereby reducing the amount that students pay out of their own (or their parents') resources. Tuition waivers and other forms of aid to students from institutional sources are treated as an item of expenditure and are classified according to the form in which the aid is provided. Under "loans," only the direct subsidy provided by some source other than students is included. The unsubsidized principal and interest on these loans are a cost to students and must eventually be repaid by the student (or the student's parents) to the lender. If the amount of the loan and the amount of tuition and fees paid with borrowed funds were both included, it would, of course, result in a double counting and thus an inflation of the total financing figure.

This taxonomy of financing mechanisms also excludes expenditures that go to institutions, agencies, and organizations outside the scope of postsecondary education but that may, nevertheless, have an important impact on objectives. For example, support for special secondary school counseling for low-income and inner-city secondary school students may have as much or more impact on access as a comparable amount spent for student financial aid. Similarly, support for supplementary forms of transportation for inner-city residents who are not well served by existing public transportation may also have an important effect on access and choice. It does not seem useful at this stage to develop an expanded taxonomy, however, because the range of services and forms of expenditure is so great. For the present, at least,

policy makers should be aware that there are ways other than through traditional institutions to achieve the desired objectives and that these alternative ways should be considered in devising financing policies and mechanisms to better achieve their objectives.

A taxonomy of recipients of postsecondary education who receive financial support has been developed by the Commission and is shown in outline form below:

I. Institutional Recipients

A. Collegiate institutions, public and private

1. Leading research universities
2. Other research universities
3. Large doctorate granting institutions
4. Small doctorate granting institutions
5. Comprehensive colleges with substantial program offerings
6. Comprehensive colleges with limited program offerings
7. Selective liberal arts colleges
8. Other liberal arts colleges
9. Two-year colleges and universities
10. Professional schools and other specialized institutions

B. Noncollegiate postsecondary education; public, private nonprofit, and proprietary

1. Technical institutes and trade schools
2. Business and commercial schools
3. Cosmetology schools
4. Flight schools
5. Hospitals
6. Technical/vocational and other schools
7. Correspondence schools

C. Other postsecondary educational organizations

1. Local, state, and regional agencies
2. Other educational organizations

II. Individual Recipients

A. Individuals categorized by:

1. Family income
2. Need
3. Ability
4. Age group
5. Sex
6. Ethnic group
7. Prior educational experience
8. Residence status

B. Individuals categorized by academic participation:

1. Part-time and full-time
2. Level of study (lower division, upper division, graduate)
3. Institutional type attended

It is not necessary, of course, to deal with recipients in full detail in every case. For some purposes, for example, it may suffice to deal with all public four-year collegiate institutions as a group. In other cases, it may be necessary to go one step beyond the above taxonomy of recipients and differentiate among recipients by geographic region or political subdivision.

Financing Programs

Financing programs translate the financing mechanisms into practical decisions regarding sources of funds, levels of financing, recipient eligibility, and other specific details. The development of specific financing programs requires a great deal of technical expertise in selecting the specific means of implementing each general policy and financing mechanism. That is, if grants are to be used to increase access for low-income students, decisions must be made about the amounts, eligibility standards, administration and related factors. As another example, if the states are to be encouraged to make direct grants to private institutions to promote institutional diversity, decisions must be made

about what kinds of incentives the federal government will provide and how the states will achieve some measure of accountability.

This is not to say, however, that the choice of financing programs will always be neutral with respect to implementation of financing policies. If financing programs are to serve their proposed purposes, they must be constructed carefully and with full consideration of the possible impact of each component. The eligibility standards and administrative regulations and procedures established for a program of student grants, for example, will have a major bearing on the impact of that aid on student access and choice.

Data Base

A major activity of the Commission's staff has been the building of a national data base on postsecondary education for use in the analysis.* This data base has been constructed largely from data collected from various public and private agencies. It is stored in computer files and is accessible for analysis through interactive computer terminals. The data base is organized and cross-indexed according to the taxonomies for financing mechanisms and recipients described above. The organization of the data by these taxonomies not only permits more detailed analysis but also serves as a cross-index to similar data from different sources.

The computer data base contains four file categories:

1. Collegiate institutional data;
2. Noncollegiate institutional data;
3. Student data; and
4. Financing programs.

The collegiate institutional data deal with enrollment, degrees, programs, finances, personnel, facilities, and certain special

*This data base is described in detail in a separate Commission staff paper, *The Data Base Code Book*.

institutional activities. They are drawn primarily from data collected through the Higher Education General Information Survey (HEGIS). The noncollegiate institutional data are drawn from four sources: the Office of Education's *Vocational Education Directory Survey*, a survey of noncollegiate institutions by the Commission, an earlier unpublished survey by the Carnegie Commission, and Federal Trade Commission data. The student data are drawn from Census reports, Student Resource Surveys undertaken in four states under the supervision of the College Entrance Examination Board, and several other state financial aid studies. The financing data have been collected from HEGIS reports, individual state reports, data provided by the Council for Financial Aid to Education, material provided by the Office of Management and Budget and other federal departments and agencies, and other sources.

Interrelationships

All of the objectives identified by the Commission rely on the concerted efforts of many decision makers for their accomplishment. To direct a variety of financing mechanisms toward the attainment of one or more objectives requires an understanding of how the decisions of students, institutions, private donors, and the several levels of government are interrelated. When an institution changes its tuition, for example, it affects students' willingness to enroll in that institution. When governments change their support policies for institutions, they affect institutional willingness to accept additional students. When governments change their tax policies towards foundations and private donors, they affect the amount of private support provided to postsecondary education.

Based on data derived from recent actual experience, analysts have estimated statistically the interrelationships of some of the decisions described above, as well as others. In essence, these expressions of cause and effect hypotheses respond to the general

question: "What are the effects of changes of key policy variables on the criteria chosen to measure objectives?"

Measurements

After decisions have been made about the specific financing programs to be implemented, the criteria described above may be used to measure the actual or likely degree of accomplishment of the objectives. For this purpose, the criteria must be translated into specific qualitative and quantitative measures of the value of each alternative in terms of the desired objective. For example, one of the proposed criteria for access is participation by income level. At this stage, this criterion may be converted to a specific measure, such as the participation rate for students from families with annual incomes below \$7,500 as compared with the average participation rate of all other individuals in the total 18-24 year old age group. In addition, the total resource implications of each financing policy should be estimated so that the costs and effectiveness of each policy can be evaluated judgmentally by decision makers.

Judgmental Review

Financing decisions about postsecondary education are and should be made on the basis of judgment as well as empirical analysis. This framework provides a structure for bringing both quantitative and judgmental factors into decision making about postsecondary education. Quantitative analysis should be used where appropriate data are available and where the analysis is appropriate. However, quantitative analysis alone may leave important questions unanswered, and these questions must accordingly be decided on the basis of informed judgment.

One other point must be made. After examining the consequences of a specific financing mechanism, a decision maker may want to change some aspects of a proposed policy either to increase its effectiveness or

to decrease its costs. At that point, new financing mechanisms may be chosen and the steps of the analytical process repeated in order to assess the likely consequences of these mechanisms.

Conclusions

1. Because the arrangements for financing postsecondary education are complex, the Commission believes that policy makers will find an analytical framework useful in developing financing proposals that will accomplish the objectives they seek.
2. The Commission found useful one such analytical framework employing the following ten major elements: objectives, criteria to measure the achievement of objectives, a series of assumptions about the society and the institutions of postsecondary education, a set of general policies to accomplish the objectives, financing mechanisms to carry out the policies, specific financing programs, an extensive data base for postsecondary education, a method for estimating student and institutional responses to changes in financing, a set of measurements to describe the achievement of the objectives, and, finally, a judgmental review of the financing mechanisms and programs in relation to the objectives.

Recommendation

The Commission recommends that federal, state, and other policy makers for postsecondary education use an analytical framework similar to that described in this report for considering financing proposals.

CHAPTER 7

AN ANALYSIS OF ALTERNATIVE
FINANCING PLANS

AN ANALYSIS OF ALTERNATIVE FINANCING PLANS

This chapter presents the uses to which the Commission put the analytical framework described in Chapter 6. Utilizing the framework, the Commission analyzed several dozen alternative financing plans, and it here arrays some of its findings. In conducting this analysis, the Commission has sought: (1) to evaluate the analytical framework itself; (2) to evaluate a range of alternative financing plans in terms of the Commission's list of objectives for postsecondary education; and (3) to develop some useful generalizations regarding the impacts of the several alternative financing plans.

The first section of this chapter briefly reviews the analytical framework and indicates its ten elements. The section describes the use of the framework and discusses its limitations.

The second section of the chapter describes the analytical model used to estimate, in quantitative terms, the achievement of the objectives that would be likely to result from the implementation of a particular financing plan. The analytical model, one of the ten elements in the analytical framework, is a mathematical construct predicated upon specified assumptions about the nature of *interrelationships* between and among changes in financing and responses of students, institutions, and sources of financing. Such a model is necessary to produce the quantitative information needed to assess the achievement of objectives.

The second section also discusses another category of assumptions—about the levels of student enrollments and student responses to tuition changes—used in applying the model. The limitations of the analytical model, at this stage of its development, are discussed in this section as well.

The third section describes the basis upon which eight alternative financing plans were chosen for detailed analysis.

The fourth section shows how the estimates produced by the analytical model can be displayed and explains some of the terminology and tables involved in the evaluation of the eight financing plans.

In the fifth section, each of the eight alternative financing plans is described and evaluated at its own recommended level of financing.

The sixth section outlines the way policy makers can use the analytical framework and model to select a financing plan that most effectively achieves chosen objectives. The method of evaluating plans at a level of financing common to all the plans is illustrated here.

A seventh section briefly discusses some alternative financing *mechanisms* (the means by which assistance is delivered and the recipients of assistance) not included in any of the alternative plans.

Finally, the eighth section presents several generalizations, derived from the analysis, about the financing of postsecondary education.

Caveats

The Commission wishes to emphasize two caveats at this point:

- ▶ In arraying and analyzing the various alternative financing plans, the Commission is neither advocating a particular alternative nor suggesting that the eight alternatives described in this chapter are to be preferred over the many other alternatives that have been or might have been analyzed. Rather, the Commission conducted this analysis not only to evaluate several important alternatives but also to evaluate and demonstrate the usefulness of the analytical framework.
- ▶ The framework and model did not take into account state and regional differences. The framework and model can, however, when and if appropriate data become available, be used to take such differences into account.

Applying the Analytical Framework

In preceding chapters, several important elements of the analytical framework (described in Chapter 6) were completed, preparing the way for the use of the framework in evaluating alternative financing plans.

There are at least three approaches to using the analytical framework described in Chapter 6. The first approach, and perhaps the most ideal, is (a) to select the objectives to be achieved and the criteria to be used in determining whether the objectives are achieved; and then (b) to use the other elements of the framework to determine a set of general policies, financing mechanisms, and financing programs that will most effectively achieve these objectives.

Although policy makers could, by using the first approach, judgmentally decide on a financing plan, they would have little quantitative justification for their decision. This first approach would require an answer to the question, "What set of financing policies, mechanisms, and programs would most effectively achieve the several objectives?" Answering this question quantitatively, however, is not possible because of the state of development of certain elements of the analytical framework. The criteria (element two) are not complete; the data base (element seven) is inadequate; and the quantitative and qualitative assumptions (element three) and many interrelationships in postsecondary education (element eight) have not been well defined or fully developed.

A second approach would be to attempt to assemble a financing plan—which is made up of a set of general policies, financing mechanisms, and specific programs—that would appear likely to achieve the chosen objectives most effectively. The proposed plan could then be tested against the objectives and measures, using the analytical model and judgmental review to determine the extent to which the objectives might be expected to be achieved. If the results of the analysis were not satisfactory, modifications could be made to the proposed policies, mechanisms, and programs of the financing alternatives; and the plan could be tested again. Such a process could be repeated until a satisfactory set of policies, mechanisms, and programs was found.

A third approach, the one utilized by the Commission, is to select a number of alternative financing plans from among those that have been proposed in recent years and to test those plans against objectives, in this case, the objectives outlined in Chapter 2. This approach, it was decided, would (a) demonstrate the analytical process adopted by the Commission; (b) indicate the usefulness and the limitations of the analytical framework in analyzing various financing alternatives; (c) produce useful information about the plans analyzed; and (d) yield some generalizations about financing postsecondary education.

Limitations of the Analytical Framework

Although the framework developed by the Commission provides a valuable process for analyzing financing plans, such frameworks, at this stage in their development, have several limitations:

- ▶ There are no acceptable quantitative or subjective criteria for measuring progress toward the achievement of some of the objectives;
- ▶ For other objectives, where acceptable criteria are available, the data to make possible the use of the criteria are not available.
- ▶ The analytical model, step eight of the framework, has limitations of its own, as discussed in the following section. In particular at this stage of its development, it can estimate student enrollment response to tuition changes but not institutional responses to a variety of institutional aid mechanisms.

The Analytical Model: Element Eight of the Analytical Framework

To apply the analytical framework, a mathematical construct was used to estimate, in quantitative terms, the achievement of the

objectives that would result from the implementation of a particular financing plan. The analytical model—element eight of the analytical framework—addresses the question, "What are the important interrelationships between and among changes in financing and the responses of students, institutions, and sources of financing?"

All of the objectives identified by the Commission rely for their achievement on the concerted efforts of many decision makers. To direct a variety of financing mechanisms toward the attainment of one or more objectives requires an understanding of how the decisions of students, institutions, private donors, and the several levels of government are interrelated. When, for example, an institution changes its tuition, the change affects the students' willingness to enroll in that institution. When governments change their policies for institutional aid, the change affects the institutions' willingness to accept additional students. When governments change their tax policies toward foundations and private donors, the change affects the amount of private support provided to postsecondary education.

Analysts have, based on data derived from recent actual experience, estimated statistically the interrelationships of decisions by students, institutions, private donors, and the several levels of government. In essence, these expressions of cause and effect hypotheses respond to the general question, "What are the effects of changes of policy variables on the decisions of students, institutions, and public and private donors and, therefore, on the achievement of objectives?"

While not all of these important interrelationships have been quantitatively derived, several have been. These quantitatively-derived interrelationships provide a sufficient basis for the development of an analytical model that can calculate the enrollment and dollar changes likely to occur as a result of changes in policy variables.

Steps of the Analytical Model

The analytical model—a mathematical construct predicated upon specified assumptions—consists of a series of twelve steps. The first step was to assume a set of enrollment projections for the period of the analysis and enter them in the computer. For this purpose, the 1973 projections of the National Center for Educational Statistics were used. These projections, which are used for federal program planning by the U.S. Office of Education, reflect recent demographic and enrollment trends but do not differentiate enrollments by level of student or type of institution. This differentiation was done by the Commission with the results shown in Table 1. As there are no national projections of noncollegiate enrollments, it was assumed that such enrollments would increase at the same rate as the general population.

The second step was to enter into the computer the tuition changes proposed in each plan. Where no changes were proposed, the projected figures shown in Table 2 were assumed. The projection was obtained by assuming an annual 5.8 percent rate of inflation for reported 1971-1972 tuition and fee income per student.¹

The third step was to enter into the computer the increase or decrease in student financial aid (grants only) proposed in each plan. These figures were differentiated by source (federal or state), institutional type, and student level.

The fourth step was to enter into the computer a figure for the maximum family income permitted for student grant eligibility. In most cases, additional student grants were limited to students from families with an annual income of \$15,000 or less.

The fifth step was to enter into the computer the average current cost per student by level of enrollment and major institutional category. This information provides a basis for estimating the costs of enrollment changes resulting from the alternative financing plans. The cost figures used as a base were derived from HEGIS (Higher Education General information Survey) reports and are shown in Table 3. The differentiation by

Table 7-1: Projected Enrollment by Sector, 1971-72 to 1984-85

Year	Public 2-year	Public Four-Year			Private 2-year	Private Four-Year			Noncol- legiate
		Lower Div	Upper Div	Grad & PG		Lower Div	Upper Div	Grad&PG	
1971-72	1,568,810	1,785,814	1,485,358	949,672	109,617	826,039	629,934	513,560	1,568,627
1972-73	1,607,318	1,733,834	1,556,497	1,045,179	103,277	807,292	633,671	536,805	1,600,000
1973-74	1,763,000	1,797,200	1,612,990	1,082,810	95,000	823,750	646,080	549,170	1,632,000
1974-75	1,836,000	1,810,000	1,624,475	1,090,525	92,000	831,500	652,160	554,340	1,662,000
1975-76	1,913,000	1,832,400	1,644,580	1,104,020	94,000	839,255	658,240	559,505	1,698,000
1976-77	1,990,000	1,856,850	1,666,480	1,118,720	97,000	849,455	666,240	566,305	1,732,000
1977-78	2,056,000	1,880,800	1,688,020	1,133,180	98,000	860,470	674,880	573,650	1,767,000
1978-79	2,108,000	1,893,600	1,699,510	1,114,890	99,000	868,225	680,960	578,815	1,802,000
1979-80	2,138,000	1,894,000	1,699,865	1,114,135	100,000	867,410	680,570	578,270	1,838,000
1980-81	2,155,000	1,890,400	1,696,635	1,138,965	100,000	863,330	677,170	575,550	1,875,000
1981-82	2,162,000	1,874,000	1,681,915	1,129,085	97,000	858,840	673,600	572,560	1,912,000
1982-83	2,146,000	1,845,200	1,656,065	1,111,735	97,000	844,970	662,720	563,310	1,950,000
1983-84	2,106,000	1,807,200	1,621,960	1,088,840	95,000	822,935	645,440	548,625	1,990,000
1984-85	2,052,000	1,760,000	1,579,600	1,060,400	93,000	792,740	621,760	528,500	2,029,000

Source: NCES, apportioned to sector by NCFPE staff estimates.

Note: Headcount enrollment.

Table 7-2: Projected Annual Tuition Charges by
Institutional Type, 1977 and 1980

Institutional Type	1977	1980
Community College (Pub. 2-Yr.)..	\$192	\$228
Public 4-Yr. Lower Division.....	583	691
Public 4-Yr. Upper Division.....	583	691
Public 4-Yr. Graduate.....	583	691
Private Undergraduate.....	2,039	2,415
Private Graduate.....	2,039	2,415
Noncollegiate.....	1,326	1,570

Source: HEGIS, *Financial Statistics of Institutions of Higher Education (1971-72)*.

Note: HEGIS finance data for 1971-72 inflated by 5.8% per year.

Table 7-3: Institutional Cost Per
Additional Student, 1971-72

Type and Level of Institution	Amount
Public 2-year.....	\$1,501
Public 4-year	
Lower Division.....	1,533
Upper Division.....	2,300
Graduate.....	4,600
Private 2-year.....	2,163
Private 4-year	
Lower Division.....	2,019
Upper Division.....	3,029
Graduate.....	6,057
Noncollegiate.....	1,000

institutional type was based on an assumed ratio of 1 to 1.5 to 3.0 for lower, upper, and graduate division costs.

The sixth step was to project enrollment for 1977 and 1980 based on estimated enrollment responses to the tuition figures used in the second step. The student responses to tuition changes were calculated from studies conducted over the past several years. Most of these studies, using data for individual states and groups of states, have been based on observations over a period of five to ten years. Those that use data from the 1960s cover changes in the economy, selective service policy, campus conditions, the demand for trained personnel, and other factors that affect student decisions.²

The figures used by the Commission in this sixth step were drawn from a study of student enrollment tuition response that was begun in 1960. The study covered four states—California, Massachusetts, North Carolina, and Pennsylvania. As indicated in Table 4, it was estimated that an increase of \$100 in tuition would reduce enrollment by approximately 0.7 percent among upper-income students, 1.2 percent among middle-income students, and 3.1 percent among low-income students—with variations depending on the type of institution. In addition, there are cross effects—changes in enrollment in one institutional type resulting from tuition changes in another. These effects are also shown in Table 4. It is estimated that an increase of \$100 in tuition in one type of institution will, depending on the type of institution, increase enrollments in a competing type by .05 to 0.5 percent.

Changes in student grants were treated like changes in tuition; that is, an increase in student aid was estimated to have the same impact as an equivalent reduction in tuition.

The seventh step was to calculate enrollments in 1977 and 1980, taking into account proposed changes in student aid (step three) as well as tuition change. In addition to the price responses in step six, a formula based upon the 1972 needs analysis procedures of the U.S. Office of Education was used to describe the financial need of students. Obviously, if these procedures change, it will also be necessary to change the formula used in this analysis.

Table 7-4: Price Response Coefficients by Type of Institution and Family Income
(%/\$100)

Income Group	Institutional Sector	Public 2-year	Public Four-year			Private 2-year	Private Four-year			Non-coll.
			Lower Div.	Upper Div.	Grad. & Prof.		Lower Div.	Upper Div.	Grad. & Prof.	
Low Income Students (less than \$7,500)	Public 2-Yr.	-2.950	.321			.218	.161			.218
	Public 4-Yr: LD	.509	-3.130			.218	.161			.218
	UD							.161		
	G&P			-3.130	-3.130				.161	
	Private 2-Yr	.509	.321			-3.240	.161			.218
	Private 4-Yr: LD	.509	.321			.218	-3.260			.218
Middle Income Students (\$7,500 to \$15,000)	UD			.321				-3.260		
	G&P				.321				-3.260	
	Noncollegiate	.509	.321			.218	.161			-3.240
	Public 2-Yr.	-1.230	.149			.087	.126			.087
	Public 4-Yr: LD	.130	-1.220			.087	.126			.087
	UD			-1.220				.126		
High Income Students (over \$15,000)	G&P				-1.220				.126	
	Private 2-Yr.	.130	.149			-1.280	.126			.087
	Private 4-Yr: LD	.130	.149			.087	-1.240			.087
	UD			.149				-1.240		
	G&P				.149				-1.240	
	Noncollegiate	.130	.149			.087	.126			-1.280
High Income Students (over \$15,000)	Public 2-Yr.	-.750	.092			.046	.089			.046
	Public 4-Yr: LD	.058	-.710			.046	.089			.046
	UD							.089		
	G&P			-.710					.089	
	Private 2-Yr.	.058	.092			-.760	.089			.046
	Private 4-Yr: LD	.058	.092			.046	-.710			.046
Noncollegiate	UD			.092				-.710		
	G&P				.092				-.710	
	Noncollegiate	.058	.092			.046	.089			-.760

The eighth step was to calculate net enrollment changes by subtracting the enrollment figures resulting from changes in financing from the original projections (in step one).

The ninth step was to calculate increases or decreases in the institutional cost resulting from the changes in enrollment produced by each financing plan. The change in cost represents the difference between tuition income and average institutional cost per student, multiplied by the additional enrollment.

The tenth step was to calculate increases or decreases in institutional revenue resulting from changes in enrollment and changes in tuition. This calculation was done by multiplying the enrollment change by the new tuition level and subtracting both the product of the original enrollment multiplied by the original tuition level and the amount of the new tuition revenue devoted to additional student aid.

The eleventh step was to enter into the computer any proposed changes in direct institutional aid from federal or state governments.

The twelfth step was to calculate the distribution of the additional costs among the major public and private sources of financing based upon their current share of postsecondary education costs.

The remaining calculations to describe the impacts of various financing plans were simple arithmetical calculations. That is, the numbers derived, say, from steps eight, nine, ten, and twelve have to be arrayed—by percents or absolute numbers—in a way that is best suited to a policy maker's needs. (See Arraying the Impact Data, below, for a discussion of the Commission's data array.)

Limitations of the Analytical Model

The limitations of the analytical model* fall into two major categories—data deficiencies and model design.

*For a more complete description of the limitations of this model, see a separate staff paper entitled, "Policy Analysis of Alternative Financing Plans for Postsecondary Education."

Data deficiencies: The analysis performed by the model is based on the best data available, but the data leave a great deal to be desired with respect to accuracy, consistency, and completeness. Data considerations may be categorized as: (a) student demand data; (b) institutional program data; and (c) data describing relationships among the decisions of different sources of financing.

National data on student demand for postsecondary education and on demand changes in response to financing policies are extremely limited. While information on student enrollment response to changes in student grants or tuition is available, the absence of a large-scale longitudinal study of individual choices and participation in postsecondary education makes it impossible to determine other important relationships relative to student demand and financing policy, including the impact of changes in student loans, work-study, income contingent loans, or other forms of student aid. Although the analysis focused on student grants allocated according to family income, it could have incorporated merit-based student aid and financial need based on student income, if adequate information had been available.³

Data on either changes in institutional program offerings that relate to the objectives of excellence and diversity or changes in institutional behavior that relate to objectives of independence and accountability are currently nonexistent. The analytical model provides a means for estimating how much additional money a particular financing plan would provide to institutions and how much the plan would induce savings or costs.* Because of the lack of appropriate data, however, the model does not produce information about what the institutions would be likely to do with the additional support or about its likely impact on the objectives. This major limitation must be kept in mind when considering the usefulness of the information produced by the analysis.⁴

Because data describing the relationships between and among the decisions of different sources of financing are nonexistent, the analysis

*This information is useful in making informed judgments about the effects of a financing plan on the objectives of excellence and diversity, and to some extent, independence.

is also unable to take into account the possible interaction among the financing decisions of the different sources of financial support—for example, the possible reductions in state aid as federal aid is increased.

Model design and exclusions: The model is also limited by design and/or exclusions. Undoubtedly, some important interrelationships among the demand, supply, and financing aspects of postsecondary education that should be considered in this model are not now included. Hopefully, this model or other similar models will incorporate these relationships as they are developed.

In addition, conscious decisions were made to exclude some variables which, at this time, seemed to be comparatively less important than those variables included. For example, construction costs were not included because as institutions near the peak of their growth curve, new construction is not likely in most cases.

Clearly, policy makers must be aware of the limitations of any model. In spite of these limitations, the analytical model has produced useful information that can assist policy makers in their evaluation of alternative financing plans.

The Selection of Eight Alternative Financing Plans

In the course of its analytical work, the Commission studied several dozen alternative plans for the financing of postsecondary education. From these, it finally selected eight to be described and analyzed in its report. These eight were selected on the basis of two requirements. The first requirement was that they should represent a range of policy choices extending from (a) plans that would allocate nearly all public support to institutions to (b) plans that would allocate nearly all public support to the students. The second requirement was that the plans should represent a range of judgments

*This information is useful in making informed judgments about the effects of a financing plan on the objectives of excellence and diversity, and to some extent, independence.

about who benefits from education. At one extreme, on the assumption that the individual is the primary beneficiary of his or her education, were plans that require students (and their families) to bear all or nearly all the cost of their instruction. At the other extreme, on the assumption that society is the primary beneficiary of an educated citizenry, were plans that, by eliminating tuition at public institutions, fully finance the costs of instruction from public revenues.

Although this chapter describes only eight alternative plans, the Commission's staff, in consultation with members of the Commission and others, used the analytical model to examine in detail more than fifty possible alternatives. From among these many alternatives, eight were selected that, in the opinion of the Commission, best exemplified the ranges described above.

One of the alternatives (Plan A) proposes a major shift in the responsibility for financing instructional expenditures in the public collegiate sector from public and private sources to students and their parents. A second alternative (Plan F) proposes a major shift in the other direction, transferring responsibility for financing instructional expenditures in the public collegiate sector from lower-division students and their parents to public sources. A third alternative (Plan B) proposes a substantial reduction in the public sector in current institutional aid and a corresponding increase in student aid. Two other plans (Plans G and F) would increase the current amounts of institutional aid and reduce student aid. Each of the other alternatives (Plans C, D, E, and H) contain various mixtures of institutional and student support policies falling between these extremes. Four plans (C, D, F, and H) provide additional student aid to individuals attending private collegiate institutions.

Although readers are cautioned that none of the eight alternatives is an exact duplicate of a proposal advanced by a specific organization or individual, several of the alternatives contain features prominent in financing plans advanced by national organizations or by

individuals. In each case, the alternative is intended to serve as an example of a national policy choice with respect to the support of postsecondary education.

To reiterate, in arraying and analyzing these various alternative financing plans, the Commission is neither advocating a particular alternative nor suggesting that these eight alternatives are to be preferred over the many other alternatives that might have been analyzed. Rather, the Commission described and analyzed these plans for the purpose of evaluating and demonstrating the usefulness of the analytical framework.

Each of these plans will be examined from two different perspectives. In the fifth section, each plan is described and analyzed in terms of the impact it would have on objectives at the level of financing recommended for each plan. Then in the sixth section, the same eight plans are again analyzed, but at a level of financing common to all of them. The different impacts of the several plans on the objectives of access and choice are analyzed at this common level of financing.

Arraying the Impact Data

After all of the steps of the analytical model were completed for each of the eight alternative financing plans, the Commission arrayed the data—arranging the numbers, sometimes in absolutes, sometimes in percentages—to show the estimated impacts that the alternative financing plans would have on certain postsecondary educational objectives. In the following sections, there are three kinds of tables arraying the estimates produced by the analytical model. There are (1) tables containing enrollment and financial figures for the plans at levels of financing recommended for the plans (Tables 5 and 6); (2) tables containing enrollment and financial figures for the plans at a level of financing common to all of them (Tables 8 and 9 in a later section of this chapter); and (3) a table comparing actual enrollments for 1972

with enrollments for 1980 as projected by the model in evaluating the alternatives at the level of financing recommended for each plan (Table 7).

Throughout the descriptions of the alternative financing plans (in Sections 5 and 6 of this chapter, and in the left-hand columns of Tables 5, 6, 8, and 9) are figures that extrapolate to 1977 or 1980 the 1972 financing patterns, levels, and trends described in Chapter 3. These extrapolated figures are based on the assumption that the 1972 patterns of financing and enrollment* will continue through 1980. These extrapolations are used as reference points against which the impacts of the alternative financing plans on objectives are measured.

Data in Tables 5, 6, 8, and 9 tell the estimated percentage or absolute increase or decrease from the extrapolated 1972 patterns of financing and enrollments if an alternative financing plan were implemented. These kinds of data on Tables 5, 6, 8, and 9 allow for comparisons of individual plans with the extrapolated 1972 patterns of financing and enrollments for 1977 and 1980. That is, the anticipated financing and enrollment impacts of each of the plans in 1977 and 1980 are compared with the extrapolated data for the same years. Table 7, on the other hand, compares actual 1972 enrollments with the enrollment figures projected by each of the plans in 1980—to show the different enrollment trends that would result by the implementation of each alternative plan. The data arrayed on these tables are intended to aid the reader in evaluating the eight alternative plans discussed in the fifth and sixth sections of this chapter.

Tables 5, 6, 8, and 9 present two kinds of information: the major policy decisions contained in each plan (Parts I and II) and the projected results of these decisions in terms of enrollments and

*The extrapolated figures for enrollments assume that the 1973 enrollment projections of the National Center for Educational Statistics for the collegiate sector (which were based on actual enrollments in 1972) will hold for 1977 and 1980. The extrapolated figures also assume that noncollegiate enrollments will increase at the same rate as the general population.

Table 7-5: Estimated Changes in Cost, Tuition, and Enrollment Resulting from Alternative Financing Plans Based on Proposed Financing, Fiscal 1977

Extrapolated 1972 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
I. PROPOSED PUBLIC FINANCING POLICIES ¹								
Student Aid:								
\$6,541,600,000	\$900,000,000	\$740,599,808	\$1,200,000,000	\$1,221,425,520	\$1,950,000,000	-\$1,261,749,760	\$0	\$1,600,000,000
723,000,000	180,000,000	1,798,999,810	100,000,000	386,880,000	0	386,889,840	0	100,000,000
Institutional Aid: ²								
4,762,000,000	0	-740,599,808	0	16,666,768	0	1,587,737,860	99*	400
12,508,000,000	400*	-1,884,999,420	1,365,163,260	0	120*	0	0	150,000,000
0	0	0	\$0,000,000	386,880,000	0	386,889,840	0	50,000,000
II. AVERAGE TUITION (Before Student Aid)								
\$192	\$1,847	\$125	\$216	\$0	\$0	-\$192	\$0	\$0
583	1,456	75	-173	0	0	-583	0	0
583	1,456	75	32	\$0	\$7	0	0	0
583	1,456	75	647	100	\$7	0	0	0
2,039	0	0	0	0	0	0	0	0
2,039	0	0	0	0	0	0	0	0
1,326	0	0	0	0	0	0	0	0
III. PROJECTED COST BY SOURCE								
\$11,403,500,000	\$378,788,864	\$1,217,280	\$1,219,404,800	\$1,386,669,310	\$1,055,309,440	\$318,248,704	\$852,553,472	\$3,508,513,280
13,231,000,000	-5,440,136,678	21,169,744	1,711,792,115	466,926,713	634,503,314	226,742,457	0	247,099,018
10,064,100,000	493,392	151,021,216	72,240,352	144,902,160	47,010,240	33,172,928	0	105,223,296
8,219,000,000	-149,282,720	559,728,896	298,797,568	412,524,544	242,149,296	80,165,024	0	388,719,616
\$42,917,600,000	-\$5,219,127,500	\$733,136,896	\$3,302,234,370	\$2,411,022,580	\$1,978,971,900	\$658,328,576	\$852,553,472	\$4,249,554,690

Table 7-5 (continued)

Extrapolated 1972 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
IV. PROJECTED ENROLLMENT								
1,000,000	-483,172	-51,740	1,990	-30,248	-16,913	32,435	0	-22,686
1,500,000	-303,506	11,140	40,479	-1,471	41,126	-62,945	0	13,126
1,600,400	-524,903	34,662	16,098	26,497	20,531	0	0	32,830
1,118,720	-213,801	11,075	11,187	6,265	4,475	0	0	0
6,632,000	-3,327,522	5,137	70,653	843	19,217	96,780	0	25,870
1,535,000	101,248	103,088	147,022	133,443	59,567	69,115	0	108,009
506,305	12,362	622	25,131	-288	-227	0	0	0
2,062,000	118,310	163,710*	172,160	153,360	59,340	69,115	0	108,009
1,752,000	144,795	146,327	44,106	33,172	72,051	-20,264	0	98,531
10,486,000	-3,000,417	313,374	286,981	207,275	130,408	86,259	0	231,990
Undergraduate Enrollment by Family Income:								
3,144,117	-854,144	297,292	208,538	184,393	137,109	-77,418	0	211,683
2,615,357	-233,308	26,417	26,136	-20,244	13,432	9,440	0	27,202
2,898,801	-167,812	-9,354	-2,608	4,058	-2,319	-76,375	0	0
V. PROJECTED COST PER ADDITIONAL STUDENT (RATIO OF INCREMENTAL COST TO INCREMENTAL ENROLLMENT)								
Federal Government.....	—	82	\$1,667	\$3,469	\$1,106	—	—	\$7,789
State and Local Governments.....	—	35	3,743	1,167	2,602	—	—	348
Student and Family.....	—	931	633	1,031	831	—	—	863
Private Sources.....	—	251	158	962	163	—	—	214
Total Cost per Additional Student	—	\$1,219	\$7,222	\$6,635	\$6,791	—	—	\$9,438

¹All additional student and institutional aid figures are based on a maximum eligible family income of \$15,000, except Plan D model, which has an eligibility ceiling of \$18,000.

²Consists of block grants, capitation grants, or dollars per student aided.

³The money the federal government would give state or local governments to be distributed for postsecondary education.

⁴Includes such funds as income from gifts, endowments, and auxiliary enterprises.

* Dollars per student.

Table 7-6: Estimated Changes in Cost, Tuition, and Enrollment Resulting from Alternative Financing Plans Based on Proposed Financing, Fiscal 1980

Extrapolated 1972 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
I. PROPOSED PUBLIC FINANCING POLICIES ¹								
Student Aid:								
Federal.....	\$1,200,000,000	\$876,999,936	\$1,500,000,000	\$1,628,600,060	\$1,250,000,128	-\$1,681,344,000	\$0	\$1,800,000,000
State.....	240,000,000	2,129,999,870	110,000,000	395,280,128	0	485,600,000	0	100,000,000
Institutional Aid: ²								
Federal.....	0	-876,999,680	0	16,666,762	0	1,942,403,840	98*	400
State and Local.....	600*	-1,876,499,200	1,608,447,490	0	170*	0	0	130,000,000
Federal Aid Through States ³	0	0	55,000,000	395,280,128	0	485,600,000	0	50,000,000
II. AVERAGE TUITION (Before Student Aid)								
Public Two-Year.....	\$2,187	\$658	\$347	\$0	\$0	-\$228	\$0	\$0
Public Four-Year, Lower Division.....	1,724	516	-116	0	0	-691	0	0
Public Four-Year, Upper Division.....	1,724	516	171	50	92	0	0	0
Public Four-Year, Graduate.....	1,724	516	1,034	100	162	0	0	0
Private, Undergraduate.....	0	0	0	0	0	0	0	0
Private, Graduate.....	0	0	0	0	0	0	0	0
Noncollegiate.....	0	0	0	0	0	0	0	0
III. PROJECTED COST BY SOURCE								
Federal.....	\$583,627,912	-\$114,112,768	\$1,525,538,020	\$1,796,249,570	\$1,261,571,648	\$247,219,268	\$873,924,096	\$3,780,706,300
State and Local.....	-5,544,197,772	-2,211,353,612	2,005,535,467	510,760,135	748,305,679	792,831,781	0	262,617,036
Institutional Funds ⁴	40,766,704	153,581,024	89,687,920	200,239,584	77,643,536	46,624,608	0	135,977,920
Students and Family.....	-181,318,912	559,310,848	389,079,020	593,408,768	348,358,144	103,756,768	0	508,569,344
Total Costs.....	-\$5,101,117,440	-\$1,612,572,420	\$4,009,840,130	\$3,100,677,630	\$2,435,678,980	\$500,434,316	\$873,924,096	\$4,687,863,810

Table 7-6 (continued)

Interpolated 1972 Enrollment Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
IV. PROJECTED ENROLLMENT								
2,138,000	-676,172	-168,902	37,843	-36,774	-18,600	-44,470	0	-26,484
1,699,000	-265,731	-87,237	26,137	1,326	11,932	-93,183	0	16,687
1,699,005	-303,179	-52,696	60,005	35,827	35,817	0	0	33,69*
1,114,135	-234,580	-76,207	5,014	6,230	11,580	0	0	0
6,846,000	-1,679,662	-565,042	128,998	4,618	39,719	-137,655	0	26,240
1,647,730	137,091	185,534	96,555	188,100	78,332	88,813	0	125,537
579,270	41,688	4,305	-3,007	-347	-578	0	0	0
2,226,000	178,779	189,929	87,448	188,153	77,664	89,813	0	125,537
1,839,000	186,373	74,978	66,303	75,342	79,218	-22,975	0	111,367
10,910,000	-1,284,510	-135	283,810	268,313	196,791	-71,817	0	283,404
Undergraduate Enrollment by Family Income:								
5,487,073	-538,978	175,400	271,992	230,444	170,467	-112,432	0	233,634
2,725,971	-285,954	-41,433	25,079	26,160	18,809	8,723	0	-19,713
3,004,551	-206,713	-67,864	-15,223	5,408	-3,603	31,648	0	0
V. PROJECTED COST PER ADDITIONAL STUDENT (RATIO OF INCREMENTAL COST TO INCREMENTAL ENROLLMENT)								
Federal Government.....	--	-5651	\$2,743	\$3,597	\$2,683	--	--	\$7,605
State and Local Governments.....	--	-12,617	3,606	1,023	2,783	--	--	329
Student and Family.....	--	3,191	700	1,188	948	--	--	1,023
Private Sources.....	--	876	361	401	211	--	--	274
Total Cost Per Additional Student	--	-49,201	\$7,211	\$6,210	\$6,625	--	--	\$9,430

¹ All additional student and institutional aid figures are based on a maximum eligible family income of \$15,000, except Plan D model, which has an eligibility ceiling of \$18,000.

² Consists of block grants, capitation grants, or dollars per student aided.

³ The money the federal government would give state or local governments to be distributed for postsecondary education.

⁴ Includes such funds as income from gifts, endowments, and auxiliary enterprises.

* Dollars per student.

Table 7-7: Absolute and Percentage Increase or Decrease in Projected Enrollment from 1971-72 Based Upon Recommended Financing, Projection for Fiscal 1980

Institutional Type	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
<u>Absolute Increase or Decrease</u>								
Public 2-Year.....	-46,982	400,288	607,033	532,416	550,590	524,720	569,190	543,106
Public 4-Year, Lower Div....	-257,545	40,949	134,323	109,512	120,118	15,001	108,186	124,853
Public 4-Year, Upper Div....	-178,672	161,811	274,512	248,334	249,864	214,507	214,507	250,204
Public 4-Year, Graduate.....	-90,117	88,256	169,477	170,702	175,493	164,463	164,463	164,463
Total, Public Institutions	-573,316	691,304	1,185,345	1,060,964	1,096,065	918,691	1,056,346	1,082,626
Private Undergraduate.....	219,231	267,674	173,095	270,640	160,572	170,953	82,140	207,697
Private Graduate.....	106,398	69,105	61,703	64,363	64,132	64,710	64,710	64,710
Total, Private Institutions	325,629	336,779	234,798	335,003	224,704	235,663	146,850	272,407
Noncollegiate.....	424,373	412,978	304,903	313,542	317,218	215,025	238,000	380,940
Total Enrollment.....	176,686	1,441,061	1,715,046	1,709,509	1,637,987	1,369,379	1,441,196	1,735,973
<u>Percentage Increase or Decrease</u>								
Public 2-Year.....	-3.0%	25.5%	38.7%	33.9%	35.1%	33.4%	36.3%	34.6%
Public 4-Year, Lower Div....	-14.4	2.3	7.5	6.1	6.7	0.8	6.1	7.0
Public 4-Year, Upper Div....	-12.0	10.9	18.5	16.7	16.8	14.4	14.4	16.8
Public 4-Year, Graduate.....	-9.5	9.3	17.8	18.0	18.5	17.3	17.3	17.3
Total, Public Institutions	-9.9	11.9	20.4	18.3	18.9	15.9	18.2	18.7
Private Undergraduate.....	14.0	17.1	11.1	17.3	10.3	10.9	5.2	13.3
Private Graduate.....	20.7	13.5	12.0	12.5	12.5	12.6	12.6	12.6
Total, Private Institutions	15.7	16.2	11.3	16.1	10.8	11.3	7.1	13.1
Noncollegiate.....	26.5	25.8	19.1	19.6	19.8	13.4	14.9	24.3
Total Enrollment.....	1.8	15.2	18.2	18.1	17.3	14.5	15.2	18.4

financing patterns (Parts III, IV, and V). Parts I and II include policy decisions in terms of federal and state student aid; federal, state, and local institutional aid; federal aid through the states (intergovernmental transfers); and average tuitions by student level and sector. These policy decisions are expressed as incremental changes—increases or decreases from the extrapolated 1972 financing patterns and enrollments. These decisions are put into the analytical model and the results are shown in Parts III, IV, and V in terms of dollars and enrollment.

Part III, the projected cost by source, presents changes in the shared responsibility for financing that would result from proposed policy changes. This part of Tables 5, 6, 8, and 9 presents the financial responsibility that would be borne by federal, state, and local governments as well as students and their families (from tuition and fees). In addition, the incremental dollars required from the institutions' own funds, from such sources as gifts, endowment income, and auxiliary enterprises, are included.

It is evident that changes in public policy for financing postsecondary education can have direct effects on the degree of sharing of responsibility for financing public institutions; however, it is important to note that private institutions are also affected, although indirectly, by such changes. For example, a public policy change causing a rise in tuition in the public sector, without offsetting student aid, might result in the private sector becoming more attractive to students. In turn, private institutions would then experience increasing enrollments, requiring them to derive additional institutional funds, since neither tuition nor institutional aid from governments covers the full cost of each additional student. Therefore, each public policy decision potentially produces changes—in all sectors of postsecondary education—in the share that financing sources must bear.

The impacts on enrollment calculated by the model for each financing plan are presented in Part IV by institutional type and by student

level. These enrollments are compared with 1977 or 1980 extrapolated financing patterns and enrollments, depending on the table being read.

Part V reflects the incremental changes in total financing, expressed in terms of the average cost per additional student. This cost per additional student does not mean, of course, that any one student receives the amount calculated. The average cost per additional student is the ratio of the net change in expenditures by all sources of support divided by the net change in enrollment.

Evaluation of Alternative Financing Plans at Their Own Recommended Financing Levels

In the following pages, each of the eight alternative financing plans is described according to its general policies, financing mechanisms, and, where possible, financing programs. For each financing plan, the description in this section reflects the level of financing recommended for the plan as distinguished from the common or controlled level of financing described in the next section of this chapter. The evaluation focuses upon the effectiveness of each plan in achieving the national objectives of student access, student choice, student opportunity, and shared responsibility.

Ideally, the evaluation would also have dealt with the objectives of diversity, excellence, independence, and accountability. However, in the absence of usable quantitative measures of achievement for these four objectives, the evaluation would have been entirely judgmental, and the Commission thought it inappropriate here to present such an evaluation. The Commission nonetheless urges policy makers to make such judgments, because no financing plan should be selected on the basis of the available quantifiable evidence alone.

It must also be emphasized that the data and measures for student access, choice, opportunity, and shared responsibility are still limited and incomplete. The reader should be warned that the available data alone cannot support conclusions about any of the four objectives discussed.

The reader is reminded that the analysis of alternative financing plans that immediately follow uses the level of financing recommended for each plan and that each plan is compared with the 1977 or 1980 levels of expenditure and enrollment extrapolated from 1972 financing patterns, levels, and trends (provided in the left-hand columns of Tables 5 and 6).

Financing Plan A

This plan proposes a major shift in the responsibility for financing postsecondary education from public and private sources to students and parents. This plan recommends a total financing level in 1980 of \$45.3 billion. Of this total, public financing would be reduced in 1980 by \$5.0 billion, to a total of \$23.6 billion.***

1. The general policies proposed under Plan A are these:
 - a. The average level of tuition at public collegiate institutions should be increased so that students pay nearly the full cost of their education;
 - b. Public and private tuition should reflect institutional cost differences by level and field of study; and
 - c. Student aid for low-income students should be increased so as to minimize possible enrollment reductions among this group.
2. The financing mechanisms, recipients, and programs to carry out these policies follow:
 - a. Public support for general institutional expense would be reduced;

*Total financing level includes all public and private expenditures for the postsecondary education enterprise.

**The \$23.6 billion is obtained from Table 6, Section III by adding the sum of federal, state, and local costs (rounded to +\$0.6 billion and -\$5.5 billion) to the sum of the corresponding extrapolated figures from 1972 (+\$13.0 billion and \$15.5 billion) as shown in the left-hand column.

- b. Tuition levels at both public and private institutions would be adjusted to reflect differences in the costs of education by level and field of study;
- c. Additional grants would be provided for needy students to cover fees and living costs; and
- d. Student loan funds and work-study opportunities would be increased.

3. Plan evaluation

- a. Student access. An enrollment decrease of approximately 1.2 million students, a change from 10.9 million to 9.7 million students (-12 percent), would be expected in 1980. Noncollegiate and private collegiate institution enrollments would increase by approximately 370,000 students, from 4.06 million to 4.43 million students (9 percent). Public collegiate enrollments, on the other hand, would be reduced by approximately 1.63 million students, from 6.85 million to 5.22 million students (-24 percent) or nearly one-quarter of their total projected enrollment. Students from families with incomes under \$10,000 would constitute approximately one-half of the enrollment reductions. Their enrollments would be reduced by approximately 560,000 students, from 3.49 million to 2.93 million students (-16 percent).
- b. Student choice. To the extent that enrollments in public institutions decline while enrollments in non-collegiate and private collegiate institutions increase, student choice would increase. The large increase in tuition and fees would, however, adversely affect choice for students from families with incomes under \$10,000.

c. Student opportunity. Because this plan has such a negative impact on access, it is difficult to discuss its impact on student opportunity. It may be noted, however, that the percentage reduction in 1980 of upper-division enrollment in public four-year institutions (-23 percent) would be greater than the percentage reduction for lower-division enrollment (-19 percent) in 1980. To the extent that these figures indicate that upper-division students have less opportunity to complete their programs, student opportunity would be curtailed.

d. Shared financial responsibility. This plan would result in significant shifts in the patterns of shared responsibility. In 1980, public financing of postsecondary education would change from \$28.6 billion to 23.6 billion (or, from 57 percent to 52 percent of the total cost). Federal costs would increase by \$0.6 billion while state and local costs would decrease by \$5.5 billion. Student and family contributions would decline slightly (-2 percent) due to decreased enrollments and institutional funds* would increase slightly (0.3 percent).

4. Summary of Financing Plan A

At the level of financing proposed by this plan, overall** expenditures for postsecondary education would be reduced in 1980 by \$5.1 billion, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$45.4 billion (-10 percent). Enrollments would decrease by 1.2

*The term "institutional funds" stands for gifts, endowment income, auxiliary enterprises, or other funds not reflected in the other categories listed in Part III of Tables 5, 6, 8, and 9.

**Throughout this section, the phrase "overall expenditures," like "total financing level," refers to the sum of all expenditures in postsecondary education.

million students, from 10.9 million to 9.7 million students (-11 percent), substantially reducing student access. Choice for students from families with incomes under \$10,000 would be adversely affected, whereas choice among the sectors for those students who would be able to attend is enhanced. Upper-division students in public four-year institutions would probably have less opportunity to complete their programs. The shared responsibility for financing postsecondary education would be significantly changed. The costs of postsecondary education borne by the public would decline by \$5.0 billion (17 percent).

The net effect of this plan is that students would carry a substantially increased burden. The implementation of this proposal would require hundreds of public institutions to increase their tuition (with the approval of their respective state authorities), to apply the additional revenues to student aid.

Financing Plan B*

This plan proposes a substantial reduction in current institutional aid and a corresponding increase in student aid. This plan recommends a total financing level in 1980 of \$48.4 billion. Of this total, public financing would be reduced by \$2.3 billion, to a total of \$26.2 billion.

1. The general policies proposed under Plan B are these:
 - a. State appropriations to public institutions should be reduced;
 - b. Tuition at public collegiate institutions should approximate 50 percent of educational costs;

*This plan contains several elements that are similar to those in a plan recently proposed by the Committee for Economic Development.

- c. Federal categorical support for institutions should be reduced; and
 - d. Student aid should be increased to offset tuition increases.
2. The financing mechanisms, recipients, and programs to carry out these policies follow:
- a. Federal categorical support would be reduced by \$740 million beginning in fiscal 1977;
 - b. State and local institutional support would be decreased by \$1.8 billion beginning in fiscal 1977;
 - c. Tuition at public four-year institutions would be raised to 50 percent of the cost of instruction within five years;
 - d. Tuition at public two-year institutions would be raised to 50 percent of the cost of instruction within ten years;
 - e. Grants to low-income students would be increased; and
 - f. Student loan funds and work-study opportunities would be increased.
3. Plan Evaluation
- a. Student access. No significant change in total enrollment in 1980 is anticipated in this plan. Public collegiate institutional enrollments would be reduced by approximately 370,000 students, from 6.85 million to 6.48 million students (-5 percent). Noncollegiate and private collegiate institution enrollments, on the other hand, would increase by approximately 370,000 students, from 4.06 million to 4.43 million students (9 percent). Enrollment from families with annual incomes under

\$10,000 would increase by approximately 175,000 students, from 3.49 million to 3.66 million students (5 percent).

- b. Student choice. To the extent that an increased participation rate in private institutions for students from low-income families is an indicator of greater choice, this plan would improve student choice.
 - c. Student opportunity. Under this plan, student aid for all undergraduates would be substantially increased, thus improving opportunity. However, since lower- and upper-division enrollments in public four-year institutions both decline in 1980 in equal proportions (3.6 percent and 3.1 percent, respectively), the impact of this plan on student opportunity is small.
 - d. Shared financial responsibility. This proposal would result in significant shifts in the pattern of shared responsibility. In 1980, public financing for post-secondary education would change from \$28.6 billion to \$26.2 billion (or, from 57 percent to 54 percent of the total cost). Federal costs would decrease by \$114 million, while state and local costs would decrease by \$2.2 billion. On the other hand, student and family contributions would increase by \$560 million (a change from 19 percent to 21 percent of the total), and institutional funds would increase by \$150 million (1 percent).
4. Summary of Financing Plan B

At the level of financing proposed for this plan, overall expenditures would be reduced in 1980 by \$1.6 billion from \$50.4 billion (assuming the extrapolated 1972 financing patterns) to \$48.8 billion (-3 percent). While no significant change in total enrollments is expected, public collegiate

sector enrollments would decrease by about 370,000 students (-5 percent), and noncollegiate and private collegiate sector enrollments would increase by about 370,000 students (9 percent). Student choice and opportunity would be enhanced. The costs of postsecondary education borne by the public would decline by \$2.3 billion (-8 percent), while student and family contributions would be increased by \$560 million (6 percent).

The implementation of this plan would require hundreds of public institutions to increase tuition (with the approval of state authorities), and the additional revenues from tuition would have to be earmarked for institutional aid.

Financing Plan C*

This plan proposes a shift in the relative proportion of student aid to institutional aid by providing proportionately greater increases in student aid than institutional aid. This plan recommends a total financing level in 1980 of \$54.4 billion. Of this total, public financing would be increased by \$3.5 billion, to a total of \$32.1 billion.

1. The general policies proposed under Plan C are these:
 - a. Access to lower-division instruction should be increased;
 - b. Upper-division and graduate students should pay a larger share of their institutional costs than they currently pay;
 - c. The difference between tuition at public institutions and tuition at private institutions should be substantially reduced;

*This plan contains several elements similar to those recently recommended by the Carnegie Commission as additions to changes enacted in the Education Amendments of 1972.

- d. Tuition at public institutions should be adjusted to reflect differences in institutional cost by level of instruction;
 - e. The states should provide direct aid to private institutions;
 - f. The increase in tuition income should be used to provide additional financing for student grants;
 - g. The states should be encouraged to increase student financial aid; and
 - h. The ratio of federal to state support should be 50:50 by 1980.
2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
- a. The ratio of tuition at public institutions to tuition at private institutions would be increased to 1:2.5;
 - b. Public tuition for the lower, upper, and graduate levels would be set at ratios of 1:1.5:3.0;
 - c. State-financed capitation grants would be provided to private institutions;
 - d. Financing for Basic Educational Opportunity Grants* would be increased to cover 75 percent of costs for eligible students enrolled in the lower division;

*Basic Educational Opportunity Grants, enacted as part of the Education Amendments of 1972, provide an entitlement to every eligible individual to attend postsecondary education. The amount of the entitlement is based upon the individual's financial need; but it cannot exceed 50 percent of the cost of attendance or \$1,400, whichever is less.

- e. Both federal and state governments would appropriate currently authorized funds for the State Student Incentive Grant Program*; and
- f. Student loan funds and work-study support would be increased.

3. Plan Evaluation

- a. Student access. An enrollment increase of approximately 300,000 students, a change from 10.9 million to 11.2 million students (3 percent), would be expected in 1980. With the single exception of private graduate enrollments (-3,000 or -0.5 percent), enrollments of all sectors are expected to increase. Enrollment of students from families with incomes below \$10,000 would increase by approximately 270,000 (8 percent) in 1980.
- b. Student choice. This plan would not change the distribution of enrollment by income group in public and private institutions, and, therefore, neither improves nor diminishes student choice.
- c. Student opportunity. Under this plan, the enrollment changes at public four-year institutions would be approximately the same for both lower- and upper-division students, indicating that there would be no change in the opportunities afforded students in those institutions

*The State Student Incentive Grant Program provides federal assistance on a dollar for dollar basis to states that either establish new state scholarship programs, or expand existing ones. In the instance of a state that expands its program, federal matching funds are available only to the extent that the state's own contribution to its program is increased. In either event, the program offered by the state must be based on financial need, and scholarships offered by the state must not exceed \$1,500 to each student per year.

to complete their programs. Rather, large amounts of unrestricted institutional aid, through capitation grants, would be provided private institutions. If institutions provided better counseling and remedial assistance to their students, student opportunity in the private sector may be improved.

- d. Shared financial responsibility. This proposal would result in a slight increase in the public share of financing postsecondary education and a slight decrease in the student and family share. In 1980, public financing for postsecondary education would change from \$28.6 billion to \$32.1 billion (or, from 57 percent to 59 percent of the total cost). Student and family contributions would increase by \$390 million, a change from 19 percent to 18.5 percent of the total. The needed level of institutional funds would be relatively insignificant (0.7 percent).

4. Summary of Financing Plan C

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by about \$4.0 billion, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$54.4 billion (8 percent). Enrollments in all sectors, except at the graduate level in private institutions, would increase by about 300,000 students (3 percent). Public financing for postsecondary education would increase by \$3.5 billion (12 percent), while student and family contributions would increase by \$390 million (4 percent).

Implementation of this plan would require hundreds of public institutions to increase tuition. It would also require the states to respond favorably to the federal incentive program

intended to induce states to increase substantially their financing of student grants.

Financing Plan D

This plan proposes a shift in the relative proportion of student aid to institutional aid, with a substantial increase of financial aid to students, particularly to students attending private institutions. This plan recommends a total financing level in 1980 of \$53.5 billion. Of this total, public financing would be increased by \$2.3 billion, to a total of \$30.9 billion.

1. The general policies proposed under Plan D are these:
 - a. Access to postsecondary education should be increased with emphasis on undergraduate education;
 - b. Public tuition at the lower division should only be adjusted for inflation; upper-division and graduate-level tuition should rise somewhat more than the inflation adjustment. The additional tuition/revenue should be used to provide student aid;
 - c. Student aid should be increased at all undergraduate levels, at both public and private institutions, with particular attention to students attending private institutions; and
 - d. Graduate education in fields critical to society should be stimulated.
2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
 - a. Public upper-division and public-graduate tuitions would be raised by an additional \$50 and \$100 with the incremental revenue going to student aid;
 - b. Needy students would receive increased financial aid;

- c. To facilitate choice, the maximum entitlement in the Basic Educational Opportunity Grants would be raised from \$1,400 to \$1,900;
- d. The ceiling on family income for eligibility for basic grants would be raised from \$15,000 to \$18,000; and
- e. Merit-based graduate fellowships would be provided in critical fields.

3. Plan Evaluation

- a. Student access. An enrollment increase of approximately 300,000 students, a change from 10.9 million to 11.2 million students (3 percent), would be expected in 1980. With the exception of a slight reduction in the public two-year sector (-37,000 students), enrollments in all sectors would either increase or remain unchanged. It should be noted, however, that overall public collegiate enrollments would increase only slightly (4,600 or 0.1 percent students) while noncollegiate and private collegiate enrollments would increase by approximately 260,000 students (7 percent). Enrollment of students from families with incomes below \$10,000 would increase by 230,000 students (7 percent).
- b. Student choice. The number of undergraduate students enrolled in public institutions would remain essentially unchanged under this plan, but the comparable enrollment in private institutions would increase by about 190,000 students and the number enrolled in noncollegiate institutions would increase by about 80,000 students in 1980. To this extent, student choice would appear to be improved.
- c. Student opportunity. Under this plan, some unrestricted institutional aid is provided to private institutions

through small cost-of-education supplements for students receiving aid. If private institutions used the additional funds to provide better counseling and remedial assistance to students, student opportunity in the private sector may be enhanced.

- d. Shared financial responsibility. This plan would result in a slight shift in the sharing of financial responsibility. In 1980, public financing of postsecondary education would change from \$28.6 billion to \$30.9 billion (or from 57 percent to 58 percent of the total). Student and family contributions would slightly increase by about \$600 million (or 0.2 percentage points of the total cost). Institutional funds would be increased by approximately \$200 million or 2 percent.

4. Summary of Financing Plan D

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by \$3.1 billion, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$53.5 billion (6 percent). Enrollments would increase by approximately 300,000 students (3 percent), with most of this increase occurring in the noncollegiate and private collegiate sector. Public financing for postsecondary education would increase by \$2.3 billion (8 percent) while student and family contributions would be increased by about \$600 million (6 percent).

Implementation of this plan would require the states to respond favorably to a federal program of incentives for institutional aid to private institutions.

Financing Plan E

This plan proposes to hold lower-division tuition in public institutions stable (with adjustment for inflation only) while substantially

increasing aid to private institutions to enable them to improve their competitive position relative to public institutions. This plan recommends a total financing level in 1980 of \$52.9 billion. Of this total, public financing would increase by \$1.9 billion, to a total of \$30.6 billion.

1. The general policies proposed under Plan E are these:
 - a. Emphasis should be given to reducing financial barriers to students during the first two years of study, with the student's share of the cost increasing thereafter;
 - b. Lower-division tuition should be stabilized while upper-division and graduate tuition are increased somewhat;
 - c. The revenue from increased tuition at the upper-division and graduate levels should be used to raise student aid at those levels; and
 - d. State support for private institutions should be greatly increased, especially for lower-division instruction.
2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
 - a. Lower-division tuition at public institutions would be stabilized at the 1973 level, to be adjusted only for inflation. Upper-division and graduate tuition charges would rise by 10 percent per year beginning in 1977 until they reach 35 percent of upper-division costs of instruction and 40 percent of graduate-level costs;
 - b. The states would provide aid to private collegiate and noncollegiate institutions equal to 10 percent of the cost of instruction in public institutions for each lower-division and upper-division student; and

- c. The additional revenue from upper-division and graduate tuition would be used to increase student aid at those levels on the basis of need.

3. Plan Evaluation

- a. Student access. An enrollment increase of approximately 200,000 students (2 percent) would be expected in 1980. With the exception of a slight reduction in the public two-year sector (-19,000 students), enrollments in all sectors either increase or remain unchanged. It should be noted, however, that overall public enrollments increase only slightly (40,000 students or 0.6 percent) while noncollegiate and private collegiate enrollments increase by approximately 160,000 students (4 percent). Enrollments of students from families with incomes below \$10,000 would increase by approximately 170,000 students (5 percent).
- b. Student choice. The increase in need-based student grants would lower the net cost of attending public four-year institutions and private institutions more than for public two-year colleges. This result would probably cause students to shift out of public two-year colleges and into public four-year colleges, private colleges, and noncollegiate institutions. This shift would reflect an increase in student choice.
- c. Student opportunity. Under this plan, upper-division tuition would increase slightly. But the increase in student aid would more than offset the tuition change, and upper-division enrollment would rise more than lower-division enrollment, thus indicating some increase in student opportunity. With the substantially increased aid to private institutions, opportunity may be increased.

- d. Shared financial responsibility. This plan would result in slight shifts in the sharing of financial responsibility. In 1980, public financing of postsecondary education would change from \$28.6 billion to \$30.6 billion (or from 57 percent to 58 percent of the total cost). Student and family contributions would remain unchanged at 19 percent of the total. Institutional funds would not change significantly (0.6 percent).

4. Summary of Financing Plan E

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by \$2.4 billion, from \$50.4 billion (assuming that the extrapolated 1972 financing patterns continue to 1980) to \$52.9 billion (5 percent). Enrollments would increase by about 200,000 students (2 percent). Public financing for postsecondary education would increase by \$2.0 billion (7 percent) while student and family contributions would be increased by \$350 million (4 percent).

Because of the state aid to private institutions, the implementation of this plan would require the approval of the states and public institutions.

Financing Plan F

This plan proposes to shift responsibility for financing postsecondary education at the lower division from students and parents to public sources and to increase aid to institutions while reducing aid to students. This plan recommends a total financing level in 1980 of \$51.0 billion. Of this total, public financing would be increased by \$440 million to a total of \$29.0 billion.

1. The general policies proposed under Plan F are these:
 - a. The first two years of postsecondary education should be open to all individuals who seek to enroll;

- b. Tuition at the lower division for public two-year and four-year institutions should be eliminated; and
 - c. The federal government should provide institutional aid to make such elimination of tuition possible.
- 2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
 - a. By 1977, tuition and other fees would be eliminated for all lower-division students attending public institutions in the collegiate sectors;
 - b. Federal grants to lower-division students would be reduced accordingly;
 - c. Federal aid to lower-division students in private institutions would be increased to offset, in full, tuition and other fees; and
 - d. Federal support would be provided to public institutions in the form of capitation grants to replace the loss of tuition at the lower-division level.
- 3. Plan Evaluation
 - a. Student access. Because the concomitant reduction in student aid more than offsets the reduction in tuition, an enrollment decrease of about 70,000 lower-division students (-0.7 percent) would be expected in 1980. These decreases occur in all sectors, except for the private undergraduate collegiate sector, which would increase by about 90,000 students (5 percent). Enrollment of students from families with incomes below \$10,000 would decrease by about 110,000 students (3 percent).
 - b. Student choice. Although access would be reduced by this plan, and public institutions would experience

a decline in lower-division enrollment, private undergraduate enrollments would increase. Some increase in student choice would result.

- c. Student opportunity. Under this plan, student opportunity is not significantly affected. All of the tuition and student-aid changes occur at the lower-division level and, consequently, there is no change in upper-division enrollments.
- d. Shared financial responsibility. This plan would not significantly alter the patterns of shared responsibility for financing postsecondary education.

4. Summary of Financing Plan F

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by \$59.0 million, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$51.0 billion (1 percent). Enrollments would decrease by about 70,000 students (-0.7 percent). Public financing for postsecondary education would be increased by \$440 million (2 percent), while student and family contributions would increase by \$100 million (1 percent).

Implementation of this plan, reducing public tuition at the lower division, would require action on the part of state governments and public institutions.

Financing Plan G

This plan proposes a shift in the relative proportion of student aid to institutional aid by providing increased aid to collegiate institutions while holding student aid constant. This plan recommends a total financing level in 1980 of \$51.3 billion. Of this total, public financing would increase by about \$87 million, to a total of \$29.4 billion.

1. The general policies proposed under Plan G are these:
 - a. The federal government should provide increased aid to collegiate institutions to offset a serious financial crisis among them; and
 - b. This federal aid should serve to foster maximum diversity among collegiate institutions.
2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
 - a. Federal aid to institutions would be provided in the form of general institutional support based on reported enrollment. No other major financing mechanisms are proposed; and
 - b. The formula for providing institutional aid would be \$100 per full-time equivalent lower-division student, \$150 per full-time equivalent upper-division student, and \$200 per full-time equivalent graduate student, with an additional payment of \$300 per student for the first 200 students and \$200 per student for the next 100 students.
3. Plan Evaluation
 - a. Student access. This plan would provide direct institutional assistance without any constraints or requirements on its use by the recipient institutions. Because there is no assurance that tuition would be reduced or that institutional student aid would be expanded, there would be no necessary increase in student aid. Thus, there would be no necessary increase in student access. To the extent, however, that the additional institutional aid would be used to reduce tuition, provide student aid,

or otherwise enhance the attractiveness of educational programs to low-income students, access would be increased.

- b. Student choice. Because of the characteristics of this particular plan, no quantitative estimate of student choice was made. However, if an institution used its additional assistance to provide additional student aid, student choice would be increased.
- c. Student opportunity. If an institution applied its additional assistance to providing more academic tutoring and career counseling, student opportunity may increase.
- d. Shared financial responsibility. This plan would result in slight shifts in the sharing of financial responsibility. In 1980, public financing of postsecondary education would change from \$28.6 billion to \$29.4 billion (or, from 56.6 percent to 57.3 percent of the total cost), while student and family contributions would remain unchanged at 19 percent of the total. Institutional funds would also remain unchanged. All of the additional costs of this plan would be borne by the federal government. If state governments, in response to the increased federal support, however, withdrew support from public institutions, the effect of this plan would be partially vitiated.

4. Summary of Financing of Plan G

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by \$870 million, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$51.3 billion (2 percent). No changes in enrollments would be expected. Public

financing for postsecondary education would increase by about \$870 million (3 percent) while student and family contribution would remain unchanged.

Financing Plan H*

This plan proposes a shift in the relative proportion of student aid to total public aid by increasing both student aid and institutional aid, but by increasing student aid relatively more than institutional aid. This plan recommends a total financing level in 1980 of \$55.1 billion. Of this total, public financing would increase by \$4 billion, to a total of \$32.6 billion.

1. The general policies proposed under Plan H are these:
 - a. Tuition at public and private institutions should be held stable (with adjustments for inflation only);
 - b. The federal government should provide Basic Educational Opportunity Grants (BEOG) to encourage access;
 - c. The federal government should provide general institutional assistance supplemented by categorical aid that is targeted on special problems in postsecondary education;
 - d. States should be encouraged to hold constant their assistance to institutions and increase their assistance to students; and
 - e. Parents and families should be encouraged to continue their assistance to students.
2. The financing mechanisms, recipients, and financing programs to carry out these policies follow:
 - a. Support for the federal Basic Educational Opportunity Grants (BEOG) program would be substantially increased;

*This plan is based on the major postsecondary education sections of the Education Amendments of 1972.

- b. The federal government would appropriate all authorized funds for the State Student Incentive Grant Program; states would appropriate the necessary matching funds;
- c. Direct institutional aid would be extended to all non-profit postsecondary educational institutions in proportion to the number of BEOG recipients enrolled and the dollar volume of other forms of federal student assistance; and
- d. Aid would be provided for developing institutions, library improvement, and other categorical programs.

3. Plan Evaluation

- a. Student access. An enrollment increase of approximately 260,000 students (2 percent) would be expected in 1980. With the exception of enrollments in the public two-year sector (-30,000 students), enrollment in all sectors would increase or remain unchanged. Public enrollments would increase by approximately 20,000 students (0.4 percent) while noncollegiate and private collegiate enrollments would increase by about 230,000 students (6 percent). Enrollments of students from families with incomes below \$10,000 would increase by 230,000 students (7 percent).
- b. Student choice. The increase in total enrollment is the result of a .5 percent estimated decrease for public two-year colleges, .5 percent estimated increase for public four-year colleges, an estimated 2.4 percent increase for private colleges, and an estimated 2.6 percent increase for noncollegiate institutions. This shift of enrollment growth towards the private and noncollegiate institutions could be interpreted as increased student choice.

- c. Student opportunity. Under this plan, upper-division enrollment would increase at a rate greater than lower-division enrollment (.9 percent versus .4 percent), indicating an increase in the likelihood of an individual's completing his or her program.
- d. Shared financial responsibility. This proposal would result in slight shifts in the sharing of financial responsibility. In 1980, public financing in postsecondary education would change from \$28.6 billion to \$32.6 billion (or 57 percent to 59 percent of the total cost). Student and family contributions would change in 1980 from 19 percent to about 18.6 percent of the total. The needed level of institutional funds would increase by \$135 million (one percent).

4. Summary of Financing Plan H

At the level of financing proposed for this plan, overall expenditures for postsecondary education would increase in 1980 by \$4.7 billion, from \$50.4 billion (assuming the extrapolated 1972 financing patterns continue to 1980) to \$55.1 billion (9 percent). Enrollments would increase by about 260,000 students (2 percent). Public financing for postsecondary education would increase by \$4.0 billion (14 percent) while student and family contributions would increase by \$510 million (5 percent).

Because virtually all of the additional public funds would be federal, this plan could be readily implemented without requiring simultaneous state, local, and institutional decisions (except with respect to the State Student Incentive Grant Program).

Choosing Among Alternative Financing Plans

The previous section has demonstrated the use of an analytical model developed by the Commission to assess the costs and impacts of alternative financing plans. The analysis of alternative plans shows that the degree of achievement of objectives differs significantly among the plans. However, the analysis, at this stage of its development, does not indicate whether the different impacts of alternative financing plans occur because of the different levels of financing (simply spending more or less money) or because of the different mechanisms (the means by which assistance is delivered and the recipients of assistance).

This present section demonstrates the results of going one step further in the analysis. To control the effects of different levels of financing, increases in public expenditures were set at arbitrarily established figures of \$1.0 billion additional for 1977 (see Table 8) and \$1.5 billion additional for 1980 (see Table 9). For these levels of additional public expenditures, the analytical model was used to estimate the impacts of each plan on the objectives. This approach addresses the question: What is the relative effectiveness of each plan in the achievement of each objective? The results of this analysis at a controlled level of financing provide new information that could aid policy makers to select among alternative financing plans. Once a financing plan is selected, the effectiveness of different levels of financing on the achievement of objectives should be evaluated to determine the most appropriate level of financing.

In this analysis, the Commission only used quantitative measures for student-related objectives because of the limited stage of development of criteria for other objectives. Of the student-related objectives, access and choice are the two most directly addressed by the analytical model and, therefore, are the focus of this section. The results of the analysis of impacts produced by the controlled, or common, levels of financing are shown in Part IV of Tables 8 and 9. The comparative impacts of the eight alternative financing plans are discussed below in terms of their effects on access and choice.

Table 7-8: Estimated Changes in Cost, Tuition, and Enrollment Resulting from Alternative Financing Plans, Assuming \$1.0 Billion Additional Public Financing, Fiscal 1977

Extrapolated 1977 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
I. PROPOSED PUBLIC FINANCING POLICIES ¹								
Student Aid:								
\$6,441,500,000								
Federal.....	\$1,800,000,000	\$969,600,000	\$136,753,008	\$758,949,376	\$621,375,392	-\$1,185,468,930	\$0	\$426,029,056
State.....	4,925,001,750	2,324,999,940	45,584,000	208,718,624	0	469,686,784	0	26,626,816
Institutional Aid: ²								
Federal.....	0	-740,599,808	0	8,991,578	^a	1,879,045,650	113*	106
State and Local.....	400*	-1,584,999,680	622,386,944	0	101*	0	0	59,940,000
Federal Aid Through States ³	0	0	22,792,000	208,718,624	0	469,686,784	0	13,313,410
0								
II. AVERAGE TUITION (Before Student Aid)								
\$192	\$1,447	\$123	\$218	\$0	\$0	-\$192	\$0	\$0
583	1,456	75	-173	0	0	-583	0	0
583	1,456	75	32	50	57	0	0	0
583	1,456	75	647	100	57	0	0	0
2,039	0	0	0	0	0	0	0	0
2,039	0	0	0	0	0	0	0	0
1,326	0	0	0	0	0	0	0	0
III. PROJECTED COST BY SOURCE								
\$11,403,500,000	\$1,304,432,380	\$234,289,152	\$146,849,376	\$844,267,008	\$625,167,776	\$646,740,224	\$999,857,408	\$921,054,720
13,231,000,000	-303,788,808	765,763,219	863,507,510	277,162,087	387,424,398	313,806,093	0	67,038,526
10,064,100,000	187,250,592	195,833,664	4,272,056	85,978,976	28,334,992	38,500,912	0	29,935,264
8,219,000,000	601,094,164	721,305,600	53,263,888	253,574,816	149,936,256	97,851,008	0	110,975,440
\$42,917,600,000	\$1,788,988,160	\$1,917,191,420	\$1,067,892,480	\$1,460,982,550	\$1,190,863,100	\$1,136,898,050	\$999,857,408	\$1,129,041,660

Table 7-8 (continued)

Extrapolated 1972 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
IV. PROJECTED ENROLLMENT								
1,990,000	-347,255	-56,118	19,104	-18,706	-10,348	-34,225	0	-6,567
1,856,800	-162,841	18,382	41,221	-371	6,470	-54,776	0	4,458
1,666,480	-164,146	48,828	8,332	19,331	15,165	0	0	9,332
1,118,720	-215,801	-11,075	18,794	6,265	4,475	0	0	0
6,632,000	-890,045	17	87,451	6,519	16,162	-80,004	0	7,231
1,515,695	285,254	204,711	7,579	90,639	36,235	78,968	0	30,769
566,305	12,062	623	-1,925	-283	-327	0	0	0
2,082,000	297,316	209,334	5,653	80,366	35,898	78,946	0	30,769
1,732,000	257,029	184,978	-2,078	33,160	43,993	-26,326	0	28,232
10,446,000	-335,700	384,329	91,026	132,835	96,153	-36,562	0	64,222
Undergraduate Enrollment by Family Income:								
3,344,117	180,917	280,583	69,558	116,710	87,781	-48,220	0	60,529
2,615,357	-126,331	37,402	7,885	13,078	9,164	10,462	0	7,847
2,494,301	-187,812	-8,564	-2,608	2,029	-2,319	26,375	0	0
V. PROJECTED COST PER ADDITIONAL STUDENT (RATIO OF INCIDENTAL COST TO INCIDENTAL ENROLLMENT)								
Federal Government.....	--	\$293	\$911	\$3,316	\$2,886	--	--	\$7,162
State and Local Governments.....	--	960	5,355	1,088	2,562	--	--	521
Student and Family.....	--	905	330	996	807	--	--	683
Private Sources.....	--	248	26	316	132	--	--	233
Total Cost Per Additional Student	--	\$2,401	\$6,623	\$5,738	\$6,408	--	--	\$8,779

¹ All additional student and institutional aid figures are based on a maximum eligible family income of \$15,000, except Plan D model, which has an eligibility ceiling of \$18,000.

² Consists of block grants, capitation grants, or dollars per student aided.

³ The money the federal government would give state or local governments to be distributed for postsecondary education.

⁴ Includes such funds as income from gifts, endowments, and auxiliary enterprises.

* Dollars per student.

Table 7-9: Estimated Changes in Cost, Tuition, and Enrollment Resulting from Alternative Financing Plans, Assuming \$1.5 Billion Additional Public Financing, Fiscal 1980

Extrapolated 1972 Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
I. PROPOSED PUBLIC FINANCING POLICIES ¹								
Student Aid:								
\$7,746,900,000	\$2,100,000,000	\$1,839,000,000	\$292,600,064	\$1,058,893,820	\$932,985,760	-\$1,532,313,860	\$0	\$667,767,552
827,000,000	5,225,000,960	4,415,000,580	64,372,000	257,005,760	0	684,553,984	0	37,098,192
Institutional Aid: ²								
5,212,000,000	0	-876,999,936	0	10,836,506	0	2,628,982,780	169*	148
14,671,300,000	600*	-1,876,499,710	941,263,872	0	127*	0	0	56,647,264
0	0	0	32,186,000	257,005,760	0	684,553,984	0	18,549,104
II. AVERAGE TUITION (Before Student Aid)								
\$228	\$2,187	\$658	\$347	\$0	\$0	\$228	\$0	\$0
691	1,724	516	-116	0	0	-691	0	0
691	1,724	516	171	50	92	0	0	0
691	1,724	516	1,034	100	162	0	0	0
2,415	0	0	0	0	0	0	0	0
2,415	0	0	0	0	0	0	0	0
1,570	0	0	0	0	0	0	0	0
III. PROJECTED COST BY SOURCE								
\$13,058,900,000	\$1,515,685,630	\$871,441,152	\$305,285,376	\$1,163,588,350	\$942,489,504	\$1,084,513,280	\$1,498,204,420	\$1,386,862,080
15,498,300,000	-15,676,008	630,100,604	1,201,753,251	350,000,443	579,638,516	415,791,834	0	99,372,945
12,126,100,000	281,018,112	337,704,192	8,280,802	132,557,456	58,659,104	62,686,432	0	53,635,984
9,733,700,000	762,232,832	1,248,994,050	86,093,104	396,930,560	268,347,360	154,492,304	0	200,972,736
\$50,417,000,000	\$2,543,260,420	\$3,088,239,870	\$1,601,412,100	\$2,043,076,610	\$1,849,114,110	\$1,717,483,260	\$1,498,204,420	\$1,740,843,260

Table 7-9 (continued)

Extrapolated Financing Figures	Increases or Decreases from Current Financing Projection							
	Plan A	Plan B	Plan C	Plan D	Plan E	Plan F	Plan G	Plan H
IV. PROJECTED ENROLLMENT								
2,134,000	-485,326	-143,460	34,203	-25,015	-14,110	-50,029	0	-10,476
1,894,000	-228,227	-17,235	23,975	568	9,091	-79,359	0	6,429
1,699,865	-241,891	21,758	28,898	24,678	29,748	0	0	14,268
1,114,135	-284,580	-76,207	5,014	6,239	11,030	0	0	0
6,846,000	-1,210,024	-215,144	91,795	6,270	35,759	-129,388	0	10,422
1,647,730	350,802	351,296	16,807	125,227	59,648	115,671	0	49,397
578,270	Private, Undergraduate.....	14,630	-3,007	-347	-578	0	0	0
2,226,000	Total, Private Institutions.....	385,491	13,800	124,880	59,070	115,671	0	49,397
1,438,000	Noncollegiate.....	512,828	3,508	50,729	69,286	-37,311	0	44,112
10,910,000	Total Enrollment.....	-531,764	108,903	181,879	135,115	-51,028	0	104,131
	Undergraduate Enrollment by Family Income:							
3,487,073	Less than \$10,000.....	88,920	117,863	115,175	133,904	-83,454	0	92,407
2,725,971	\$10,000 to \$14,999.....	-174,190	4,362	17,446	14,175	10,632	0	11,722
3,004,351	\$15,000 and over.....	-296,713	15,323	3,095	-3,605	31,848	0	0
V. PROJECTED COST PER ADDITIONAL STUDENT (RATIO OF INCREMENTAL COST TO INCREMENTAL ENROLLMENT)								
	Federal Government.....	\$664	\$1,347	\$3,452	\$2,553	--	--	\$7,060
	State and Local Governments.....	625	5,300	1,038	2,718	--	--	506
	Student and Family.....	1,238	540	1,178	929	--	--	1,023
	Private Sources.....	338	\$7	383	203	--	--	273
	Total Cost Per Additional Student	--	\$7,066	\$6,052	\$6,404	--	--	\$8,861

1 All additional student and institutional aid figures are based on a maximum eligible family income of \$15,000, except Plan D model, which has an eligibility ceiling of \$18,000.

2 Consists of block grants, capitation grants, or dollars per student aided.

3 The money the federal government would give state or local governments to be distributed for postsecondary education.

4 Includes such funds as income from gifts, endowments, and auxiliary enterprises.

* Dollars per student.

Part IV of Tables 8 and 9 shows the changes in enrollment estimated for each plan at the controlled level of financing. The pattern of results in 1977 and 1980 are very similar and, therefore, only the 1980 results will be discussed in detail.

The Commission stresses, however, that policy makers should not select a financing plan on the basis of an analysis that evaluates the achievement of only two objectives. To the extent possible, policy makers should judgmentally evaluate the achievement of additional objectives. This judgment should supplement the type of quantitative analysis discussed below.

Access

Plan A would, it is estimated for 1980, increase the undergraduate enrollment of individuals from families earning less than \$10,000 by about 89,000 (3 percent) while reducing the enrollment of middle- and upper-income students by about 380,000 (-7 percent). The overall effect of Plan A on enrollments would be to reduce total enrollment by about 532,000 (-5 percent).

Plan B would, it is estimated for 1980, increase the undergraduate enrollment of low-income individuals by about 570,000 (16 percent), and of middle-income individuals by about 8,000 (0.3 percent), while reducing upper-income undergraduate enrollments by about 62,000 individuals (-2 percent). The overall effect of Plan B on enrollments would be to increase total enrollment by about 440,000 (4 percent).

Plan C would, it is estimated for 1980, increase the undergraduate enrollment of low-income individuals by about 118,000 (3 percent), of middle-income individuals by about 4,000 (0.15 percent), and of upper-income individuals by about 15,000 (0.5 percent). The overall effect of Plan C on enrollments would be to increase total enrollments by about 109,000 (1 percent).

Plan D would, it is estimated for 1980, increase the undergraduate enrollment of low-income individuals by about 115,000 (3 percent), of middle-income individuals by about 17,000 (0.6

percent), and of upper-income individuals by about 3,000 (0.1 percent). The overall effect of Plan D on enrollments would be to increase total enrollments by about 182,000 (2 percent).

Plan E would, it is estimated for 1980, increase the undergraduate enrollment of low-income individuals by about 134,000 (4 percent), of middle-income individuals by about 14,000 (0.5 percent), while increasing the undergraduate enrollments of upper-income individuals by about 4,000 (-0.1 percent). The overall effect of Plan D on enrollments would be to increase total enrollment by about 155,000 (1 percent).

Plan F would, it is estimated for 1980, decrease the undergraduate enrollments of low-income individuals by about 93,000 (3 percent) while increasing the undergraduate enrollment of middle-income individuals by about 11,000 (0.4 percent), and of upper-income individuals by about 32,000 (1 percent). The overall effect of Plan F on enrollments would be to decrease total enrollment by about 51,000 (-0.5 percent).

Plan G has no quantitative evidence of enrollment impacts because only institutional aid was involved and no projection was made as to how institutions might use the aid to affect enrollments.

Plan H would, it is estimated for 1980, increase the undergraduate enrollment of low-income individuals by about 92,000 (3 percent), and of middle-income individuals by about 12,000 (0.4 percent) without changing upper-income enrollment. The overall effect of Plan H on enrollment would be to increase total enrollment by about 104,000 (1 percent).

In summary, for the same level of expenditure of public funds Plan B would produce the greatest increase in low-income enrollments; Plan D would produce the greatest increase in middle-income enrollment; and Plan F would produce the greatest increase in upper-income

enrollments. Plan B would also produce the largest increase in total enrollments. Plans A and F would reduce total enrollments while, at the same level of expenditure of public funds, Plans B, C, D, E, and H would all increase total enrollments. Plan F is the only one of the eight plans presented which would decrease low-income enrollment.

Choice

Plan A would, it is estimated for 1980, increase enrollments in private collegiate institutions by about 365,000 (16 percent), and in noncollegiate institutions by about 313,000 (17 percent), while public collegiate enrollments would decrease by about 1,210,000 (-18 percent). Just over half of the loss of public enrollments would be compensated for by increases in private and noncollegiate enrollments.

Plan B would, it is estimated for 1980, increase private collegiate enrollments by about 356,000 (16 percent), and noncollegiate enrollments by about 301,000 (16 percent), while decreasing public collegiate enrollments by about 215,000 (-3 percent). The enrollment growth in the private collegiate and the noncollegiate sectors would be three times the loss in enrollment in the public collegiate sector.

Plan C would, it is estimated for 1980, increase enrollment in all sectors with public collegiate enrollments rising about 92,000 (1 percent), private enrollments rising about 14,000 (0.6 percent), and noncollegiate enrollments rising about 3,000 (0.2 percent).

Plan D would, it is estimated for 1980, increase enrollments in all sectors with public collegiate enrollments increasing by about 6,000 (0.1 percent), private collegiate enrollments increasing by about 125,000 (6 percent), and noncollegiate enrollments increasing by about 51,000 (3 percent).

Plan E would, it is estimated for 1980, also increase enrollments in all sectors with public collegiate enrollments increasing by about 36,000 (0.5 percent), private collegiate enrollments increasing by about 59,000 (3 percent), and non-collegiate enrollments increasing by about 60,000 (3 percent).

Plan F would, it is estimated for 1980, decrease public collegiate enrollments by about 129,000 (-2 percent), increase private collegiate enrollments by about 116,000 (5 percent), and decrease noncollegiate enrollments by about 37,000 (-2 percent).

Plan G again has no quantitative evidence of enrollment impacts and, therefore, no measures of student choice.

Plan H would, it is estimated for 1980, increase enrollment in all sectors with public collegiate enrollment increasing by about 10,000 (0.1 percent), private collegiate enrollments increasing by about 50,000 (2 percent), and noncollegiate enrollments increasing by about 44,000 (2 percent).

The previous discussion has outlined the achievement of access and choice by the eight financing plans all controlled for the same level of public expenditures. Other objectives are also important to policy makers, and conclusions should not be based only on access and choice but also the judgmental evaluation of the achievement of other objectives.

The selection of a financing plan should be based on an overall evaluation of the achievement of all the objectives important to a policy maker looking at a variety of financing plans, all of which are analyzed at the same level of financing. The selection of the level of financing of the desired financing plan should be based on two factors: (1) an overall evaluation of the achievement of all the objectives important to a policy maker looking at a variety of levels of financing of the desired plan, and (2) the priorities of the policy maker for the

achievement of postsecondary education objectives in relationship to other objectives.

Those policy makers concerned about the allocation of public resources to meet competing demands (such as demands for better highways, health services, and postsecondary education must decide what priority postsecondary education should receive. This decision determines, in part, the level of financing to be provided, no matter what financing plan is selected. Establishing national or state priorities is no simple task, of course, and can only be accomplished by legislative bodies through lengthy debate. Moreover, such priorities are seldom stated with any precision, except as they may be implicit in federal and state budgets. Nevertheless, such priorities do get established; and with respect to the share of public resources allocated to postsecondary education, they are crucial.

Other Selected Financing Mechanisms

The Commission's analysis has focused upon alternative financing plans rather than specific financing mechanisms (the means by which assistance is delivered and the recipients of assistance) taken separately. Nevertheless, in the course of the Commission's analytical work, several alternative financing mechanisms have been examined. These mechanisms include tax credits, vouchers, and income contingent loans.⁵

To reiterate, the mechanisms analyzed by the Commission focus on assistance to students because, in part, the data needed to analyze the impact of financing mechanisms designed to aid institutions are not fully available.

Tax Credits

For a number of years, proposals have been introduced in Congress and state legislatures that would allow tax credits or deductions for educationally-related expenses. Two states recently

enacted such legislation. The effect of these proposals is to reduce the after-tax costs of supporting a student in postsecondary education. Because the postsecondary education participation rates of students from middle- and upper-income families are higher in aggregate (and in higher cost institutions in particular) than the participation rates of students from low-income families, income tax credits would benefit the middle- and upper-income families more than low-income families. Table 10 indicates the effective average savings per student by parental-income level and by institutional type.

The results shown in Table 10 were derived from analysis of one of the more typical tax credit bills introduced in Congress. The plan provides that the maximum allowable credit for any taxable year is equal to the sum of:

- a. 75 percent of expenses up to \$200;
- b. 25 percent of expenses that exceed \$200 but are less than \$500; and
- c. 10 percent of expenses that exceed \$500 but are less than \$1,500.

This credit is reduced by an amount equal to one percent of the amount by which the adjusted gross income of the taxpayer exceeds \$25,000.

The average allowable tax credit would be the same for all income ranges in three out of five institutional categories. The reason for this result is that individuals in all income groups attending the same institution pay the same average tuition and fee rate (\$228 in 1980 for public two-year institutions, \$1,157 for private two-year institutions, and \$1,570 for noncollegiate institutions). The tax credit for students in private four-year institutions is constant at \$325, the maximum allowable credit. The tax credit varies for students attending public four-year institutions due to variations in tuition levels.

Table 7-10: Effective Savings Per Student by Parental Income Level and Institutional Type for A Typical Tax Credit Proposal

Institutional Type	Parental Income									
	Under \$3,000	\$3,000-\$5,999	\$6,000-\$7,499	\$7,500-\$9,999	\$10,000-\$14,999	\$15,000-\$24,999	\$25,000 and above			
Public Two-Year...	0	\$159	\$159	\$159	\$159	\$159	\$109			
Private Two-Year..	0	191	191	191	191	191	141			
Public Four-Year..	0	177	155	174	177	173	117			
Private Four-Year.	0	325	325	325	325	325	275			
Noncollegiate.....	0	175	175	175	175	175	125			
Average Saving per Student.....	0	188	170	193	197	204	171			

Note: 1. Maximum amount awarded per student is \$325.

2. Most families with incomes less than \$3,000 do not pay taxes, therefore, no tax credit is calculated.

3. Savings per student in public and private two-year and noncollegiate institutions are constant up to parental income of \$25,000 because a single average tuition and fee for each institutional type is used for the calculations.

As Table 10 shows, individuals with family incomes below \$3,000 would not benefit from this kind of tax credit because their incomes are normally too low to be taxable. Families with members attending private four-year institutions would derive the greatest benefit from this proposal. A family whose member attends a public two-year institution benefits least from this proposal. The tax credit delivery mechanism embodied in the proposal analyzed is approximately neutral with respect to its effects on different income groups with the exception, of course, of individuals from families with incomes so low that they pay little or no income tax.

The benefits of a tax credit proposal, of course, have costs. The cost of a tax proposal is the amount of federal revenue lost in credits against the taxes of families of the enrolled students. Although it is difficult to know exactly how many families of enrolled students in various income categories would take advantage of a tax credit provision, it is possible to estimate cost figures for alternative proposals according to the demography of the enrolled population and patterns of taxpayer behavior.

The total cost of a tax credit proposal is dependent upon the number of people who will receive the tax credit and the amount of credit they receive. The tax credit figures are based on demographic information derived from the U.S. Bureau of the Census and the expense data of students enrolled (all of data are in the Commission's data base). Based on this data, but excluding summer and part-time students, and assuming 90 percent of those who are eligible to take a tax credit will do so, the total tax revenue lost by the federal government under the particular tax credit analyzed would amount in 1980 to approximately \$1.7 billion.

Vouchers

A voucher is a ticket or coupon that can be applied by the student against the cost of attendance (fees and tuition) at eligible institutions of postsecondary education. Vouchers are usually regarded

as being provided by a governmental agency at no cost to the student or at a cost that is related to the income of the student's parents. The value of a voucher is either specified, like a bank check, or variable, depending on the costs of attendance. For example, some scholarship programs pay a stipend plus all fees and tuitions (a voucher component) at any institution that the recipient chooses to attend. The eligibility of individuals for vouchers may be general, for example, offered to everyone who wants to attend one or more years of postsecondary education. Or it may be targeted on the basis of financial need, merit, intended field of study, or some other criteria. Similarly, the eligibility of institutions that may accept and redeem vouchers in lieu of payment can be the collegiate sector, some or all of the noncollegiate sector, or both sectors.

Several of the alternatives analyzed by the Commission—such as Plan F—provided for across-the-board tuition reductions in some institutional sectors. These plans could be implemented with vouchers or institution-based capitation grants with essentially the same effects. In either case, tuition is lowered by a fixed amount for each eligible student, and the institution receives income only from the students it attracts.

Similarly, for example the Basic Educational Opportunity Grants analyzed by the Commission would provide aid in amounts varying according to the cost of attendance at each type of institution. This aid could be delivered in cash, in the form of a voucher, or by other means. The net effect of delivering such aid—either by cash or voucher—is to reduce the price paid by the student to attend each type of institution. The enrollment and financial consequences of such reductions of tuition will be described in the next section.

Income Contingent Loans

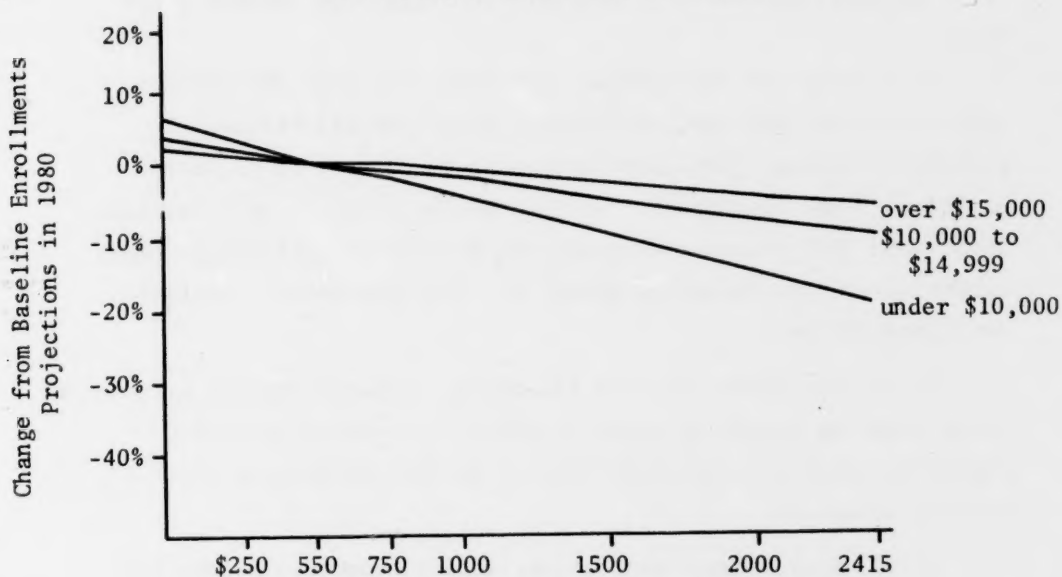
As commonly defined, income contingent loans to students are those in which the repayment schedule is determined by the income level of the student after completion of his or her education. More generally, student loan plans are usually either contingent on student (or parental) income for receipt of the loan (as in the Guaranteed Student Loan Program) or on student income for repayment of the loan (as in the Tuition Postponement Option at Yale University).

Encouraging private lenders to make loans available to students in financial need by guaranteeing these loans can be financially attractive both to government (because of high leverage) and to private lenders (because of government guarantee). On the other hand, there is concern about the large debts that many students may owe when they complete their education. Income-contingent repayment options are one alternative to assist the student to absorb some of the risk that he or she will not be able to repay student loans.

Generalizations About Financing Alternatives

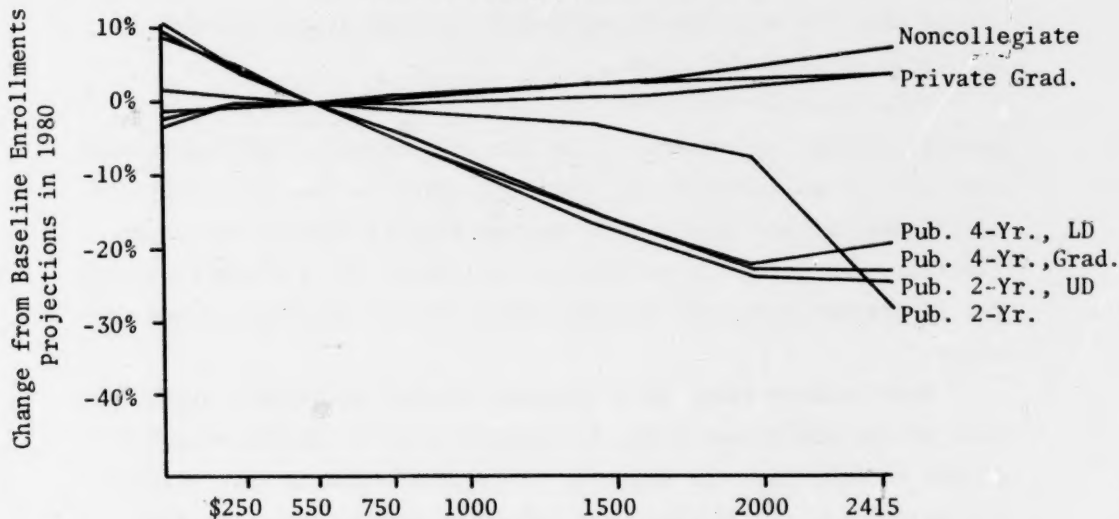
The Commission's extensive analytical work has made possible several generalizations about financing postsecondary education that are of particular significance to the evaluation of financing policies and plans. An understanding of these analytical results enables policy makers to anticipate the probable consequences of financing decisions. This understanding will also help policy makers select for further analysis those financing plans that are most likely to achieve the objectives they wish to pursue. Five generalizations yielded by the Commission's work concern: (1) targeted student assistance compared with general student assistance; (2) the effect of tuition changes on enrollment; (3) the differential impact of increases in student grants; (4) the effect of changes in the

Figure 7-A: The Impact of Tuition Changes on Enrollment in 1980 by Student Income Levels



(Assumes \$1.2 billion in Federal Student Education Opportunity Grants)

Figure 7-B: The Impact of Tuition Changes on Enrollment in 1980 by Type of Institution



(Assumes \$1.2 billion in Federal Student Education Opportunity Grants)

maximum income allowed for student grant eligibility; and (5) the level of institutional aid necessary to supplement student grant funds.

As a result of the limited data available (see the section entitled "Data Deficiencies" above), these generalizations pertain to student enrollment responses to changes in financing policies. When appropriate data become available, generalizations about both institutional response and the interrelationships among financing sources should be possible. The five generalizations developed follow:

1. *At any given level of financing, targeted student assistance plans (such as grants to needy students) are more effective for improving student access than general student assistance (such as tuition reduction).*

It is often assumed that a substantial reduction in tuition (general student assistance) will do as much to improve access as a comparable amount of aid granted directly to needy students (targeted student assistance). However, it can be clearly demonstrated that aid to reduce tuition will accomplish less in improving access than the same amount applied to student grants awarded on the basis of financial need.

This relative efficiency of targeted as distinguished from general student assistance occurs for two reasons: (a) individuals from low-income families are more responsive to the same amount of additional aid per person than are individuals from upper-income families; and (b) the more limited the number of eligible recipients the larger the aid available per recipient for the same amount of money.

Under either targeted or general student assistance plans, the cost of the additional students enrolled will be in the range of \$3,000 to \$10,000. For example, if 100,000 students were eligible for assistance and already were receiving awards averaging \$300

each, an increase in the average award to \$400 per student to attract additional students would bring each of the students already enrolled an additional \$100. But as the data discussed in the second section show, the enrollment would only increase by about 1 to 3 percent, to a total of between 101,000 to 103,000 students. The cost of the grant program would be between \$10.1 million and \$10.3 million, and the number of additional students would be between 1,000 and 3,000. Therefore, the cost per additional student would range from \$3,000 to \$10,000.

In short, large amounts of assistance applied through a general financing mechanism, such as reduced tuition, may have very little impact on access. The narrower the group of recipients eligible under the financing mechanism, the fewer the students already in the system who will receive assistance. Targeted student-aid programs, such as the Basic Educational Opportunity Grants, which are based on need, are more effective in the accomplishment of student access than generalized support.

2. Increases in the effective price (tuition minus student aid) of postsecondary education—the price the student must pay—result in decreases in enrollment; conversely, decreases in the effective price result in increases in enrollment.

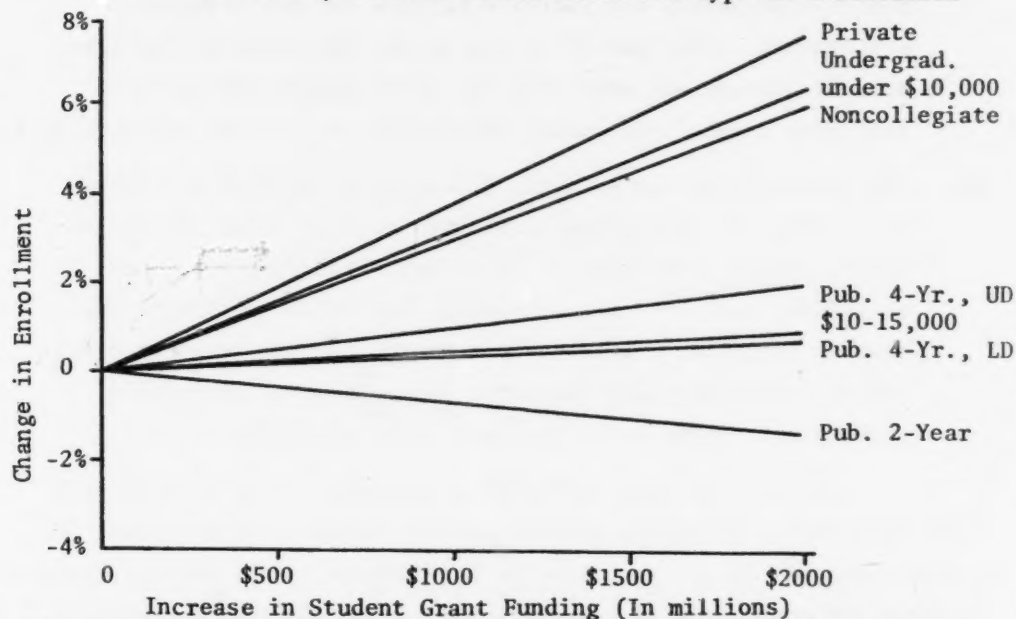
To consumers and economists, a change in the price of goods or services affects the consumption of those goods or services inversely. That is, when the price is increased, consumption will decrease; when the price is decreased, consumption will increase. The same principle holds true with respect to the cost of postsecondary education.

What is of interest, then, to those making policy and pricing decisions at the national, state, and institutional levels is how students will respond to a change in tuition. Empirical studies have shown that the amount of change in enrollment caused by a change in tuition probably varies from 1 to 3 percent for every \$100 change in tuition, depending on the type of institution, the family income of the student, and the amount of tuition charged by other institutions.

Figures A and B present estimates of enrollment changes, by type of institution and by income level, that would result if tuition at public institutions were varied from \$0 per student to \$2,500 per student. Under the extrapolated 1972 financing patterns, the average public tuition level is estimated to be approximately \$550 per student in 1980, taking inflation into account. For calculating the changes shown in Figure A, the extrapolated 1972 financing patterns were assumed, and tuition and fees in the private sector were projected to increase at the rate of inflation. Several important observations may be drawn from Figures A and B:

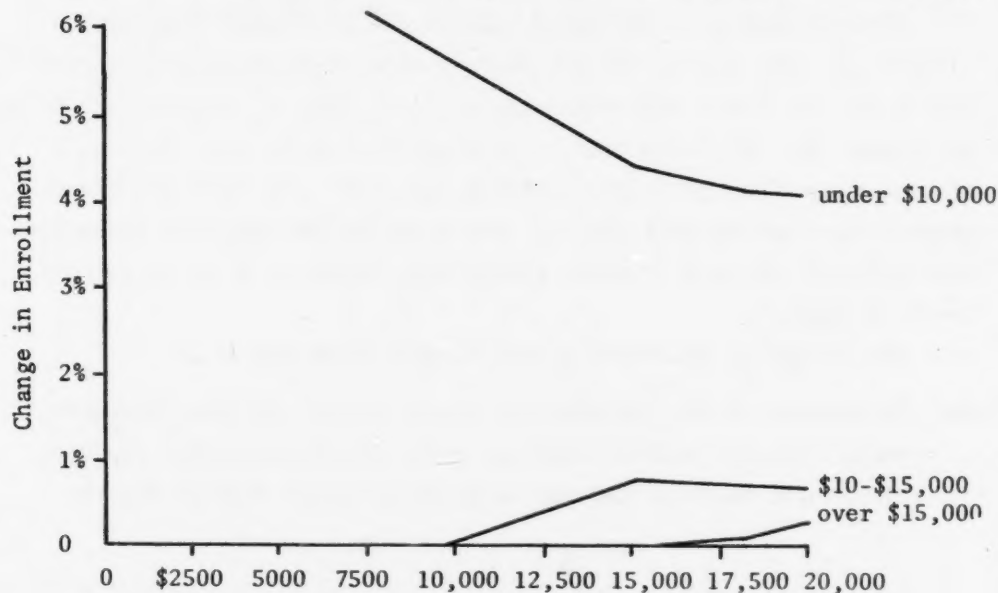
- For almost all ranges of increased tuition, students in public four-year institutions are more responsive to tuition changes than students in public two-year colleges. This finding primarily reflects the income distribution of those students. Data presented in Chapter 4 indicate that public four-year institutions enroll a larger percentage of undergraduates from families with annual incomes under \$10,000 than do public two-year institutions. For the same proportionate increase in tuition, the absolute increase in tuition in four-year institutions would be greater than the absolute increase in tuition in two-year institutions, because the four-year institutions currently have higher tuition than do the two-year institutions.
- If tuition were increased and student aid held constant, low-income students would drop out at a much faster pace than middle- and upper-income students. As tuition increased, low-income students would require increases in student aid for the payment of tuition and living costs. Without concurrent increases in student aid to offset tuition increases, low-income student enrollments would decline.

Figure 7-C: The Impact of Student Aid Funding Changes on Enrollment in 1980 by Student Income Level and Type of Institution



(Assumes current tuition levels adjusted only for price inflation)

Figure 7-D: The Impact of Changes in Student Aid Maximum Income Eligibility on Enrollment in 1980 by Student Income Level



(Assumes \$1.2 billion in Federal Basic Education Opportunity Grants)

- ▶ An increase in tuition for public institutions would decrease public enrollments and increase private and noncollegiate enrollments. This result is due to the increased attractiveness of private and noncollegiate institutions, which would lead some students to switch from public to private institutions.
- ▶ The magnitude of the effects of changes in tuition on public enrollments is substantially greater than it is on private or noncollegiate enrollments. If other policy variables, such as student aid, were held constant, the effect of increasing tuition at public institutions would be to reduce total enrollments in postsecondary education; the effect of decreasing such tuition would be to increase total enrollments.

3. Increased spending for student grants, if the extrapolated 1972 patterns of financing and enrollment continue, would result in proportionately larger increases in enrollments in the private collegiate and noncollegiate institutions than in the public sector, and enrollments in the public two-year colleges would not grow as much as would otherwise be expected.

Figure C presents the estimated changes in student enrollments in 1980 if: (1) tuition in all sectors were adjusted only for price inflation; (2) other 1972 financing programs were to continue according to trends; and (3) variations in additional student-grant financing were to range from \$0 to \$2.0 billion per year. The NCES enrollment projections used in this analysis are based on the implicit assumption that federal and state student grants will continue at their present level of support.

The following observations may be made from Figure C:

- ▶ Enrollment in all institutions except public two-year colleges would increase with increasing levels of student-grant support. The public two-year college enrollments would decline for the

following reasons: (1) because public two-year colleges charge low tuition, their students would receive smaller increases in grants than students at any other institutional type, and (2) because increases in the student grants obtainable at other types of institutions would be larger than grants available at public two-year colleges, the attractiveness of attending two-year colleges would decrease. An increase of \$2 billion in student aid would therefore result in 1980 in a decline (about one percent) or enrollments in public two-year institutions.

- Enrollments in the private collegiate and noncollegiate sectors would increase about four times as fast as in the public four-year institutions, because students enrolled in private collegiate and noncollegiate institutions would receive larger increases in grants than students enrolled in the public four-year institutions. With a maximum family income ceiling of \$15,000 for eligibility, nearly all of the enrollment increases would come from students from families with incomes of less than \$10,000.

4. If the income eligibility ceiling for student grants were changed from \$15,000 to a lower level, the enrollment of students in the \$10,000 to \$15,000 range would decrease slightly while the enrollments of students in the under \$10,000 family-income group would increase.

Figure D presents the percentage change in total enrollments in all types of institutions resulting from a change in the maximum income eligibility ceiling from \$7,500 to \$20,000; stabilizing tuition in all sectors, except for inflation; and assuming that financing for Basic Educational Opportunity Grants reaches \$1.2 billion by 1980.

The following observations may be made from Figure D:

- As the maximum income eligibility ceiling ranges from \$7,500 to \$15,000, the percentage increase in enrollments of students from families earning less than \$10,000 moves downward from about 6 percent to about 4 percent.

▶ As the maximum income eligibility ceiling ranges from \$15,000 to \$20,000, there would be little effect on the enrollment of individuals from low-income families (that is, under \$10,000) or from upper-income families (over \$15,000).

The reasons for these results are that the needs criteria for distributing the Basic Educational Opportunity Grant monies limit middle-income students to relatively small grants and students from low-income families respond more to the same dollar value of student grants than do students from middle- and upper-income families.

5. *Expanding student access to postsecondary education through increased student grant financing would require institutions to seek supplemental financial assistance to meet additional costs induced by the enrollment growth.*

Expanding access to postsecondary education through increased student grant financing would probably result in the increases in enrollments already discussed above. Assuming that public and private institutions would respond to the additional student demand for enrollment brought about by increasing student aid, and recognizing that income from student tuition and other fees covers only a portion of the costs of instruction, it is evident that the institutions would require additional financial support to provide for the additional students.

Table 11 presents an estimate of the additional financial support needed in 1980 by each institutional type, assuming \$1.2 billion were made available in student grants. Because of changes in the patterns of enrollment, tuition, and costs of instruction, public two-year institutions would require \$36 million less in operating expenses because their enrollments would decline with additional student grants. Public four-year and private collegiate institutions would need additional support of \$87 million and \$119 million, respectively, because their enrollments would increase with additional student grants.

The additional financial support needed by these institutions could be provided in many ways. If this additional financial support

Table 7-11: Impact of Student Aid Funding and Enrollment Changes on Institutional Resource Requirements in 1980, by Type of Institution

Enrollment and Cost Changes	Institutional Sector			
	Public 2-Year	Public 4-Year	Private	Noncollegiate
Increased undergraduate enrollment induced by increases in student aid grants.....	2,120,909	3,628,060	1,728,708	1,910,435
Percent of students eligible for student aid.....	N/A	46.4%	57.6%	76.1%
Change in financial resource requirements (net of changes in tuition revenue).....	-\$36,368,245	\$86,761,303	\$119,162,689	0
Alternative institutional resource requirements:				
Per student (Capitation Grants).....	0	\$24	\$69	0
Per student aided (Supplemental Grants)...	0	\$37	\$120	0

was provided by capitation grants based on total undergraduate enrollment, an amount of \$24 per undergraduate student in public four-year institutions and \$69 per undergraduate student in private institutions would be needed to cover the extra cost induced by additional enrollment in these sectors. If this additional support was provided by supplemental grants, an amount of \$37 per undergraduate student aided in public four-year institutions and \$120 per undergraduate student aided in private institutions would be needed to cover the extra cost induced by additional enrollment in these sectors.

Conclusions

The Commission concludes that an analytical framework, similar to that described in Chapter 6, provides an instrument that can significantly improve the capacity of policy makers to make decisions about the financing of postsecondary education.

However, such frameworks are difficult to develop, as demonstrated by the limitations of the analytical model, one element of the framework. For although the analytical model provides useful estimates with respect to student response to pricing decisions, the model does not, because of deficiencies, estimate institutional responses to a variety of financing mechanisms designed to aid institutions.

Recommendation

The Commission strongly recommends further research on, and development of, analytical frameworks and models similar to those used by the Commission. The Commission also recommends further collection and analysis of data which, although currently not available, would be useful for the evaluation of the impact of major financing alternatives on the achievement of national objectives, particularly objectives related to institutions, such as diversity and excellence.

CHAPTER 8

NATIONAL STANDARD PROCEDURES
FOR INSTITUTIONAL COSTING AND
DATA REPORTING

NATIONAL STANDARD PROCEDURES FOR INSTITUTIONAL COSTING AND DATA REPORTING

This chapter addresses two concerns. One is Congress's charge to the Commission to recommend "national uniform standards for determining the annual per-student costs of providing postsecondary education for students in attendance at various types and classes of institutions of higher education." The other is the Commission's objective of institutional accountability: "Institutions of postsecondary education should use financial and other resources efficiently and effectively and employ procedures that enable those who provide the resources to determine whether those resources are being used to achieve desired outcomes."

While the first of these concerns is closely related to the second, the Commission has given costing procedures special attention because of the interest of Congress, as expressed in its charge to the Commission, and because of widespread interest among postsecondary education administrators, planners, and policy makers. Therefore, the first part of this chapter describes the national standard procedures recommended by the Commission and discusses problems associated with their implementation and with the use of the cost data produced. The second part, which deals with the larger concern expressed in the Commission's objective of institutional accountability, is intended to place the matter of cost in the broader perspective of the need to improve all types of management information.

National Standard Procedures for Determining Per-Student Costs

There are at least two types of per-student cost data. The first is an average cost per student usually obtained by dividing general and educational expenditures for the institution, department, or other organizational unit within the institution by the number of students enrolled in that unit. Although useful, this type of per-student cost has some significant limitations. First, it does not accurately reflect the resource requirements for providing instruction and instruction-related services to a student, because it includes either too much or too little. Second, the unit of service—the enrolled student—is often misleading because it usually represents either departmental majors, who take many courses in other departments, or full-time equivalent enrollment constructed from some arbitrary measure of instructional activity. Nevertheless, this type of per-student cost has been the only type available for most institutions, and it has often been used for interinstitutional cost comparisons and for some resource allocation decisions by state agencies and within institutions.

The second type of per-student cost, which may be much more useful, consists of the expenditures of all the resources used (annually) in providing instruction and instruction-related services to the average student in each major field of study by level of study and institutional type. An example would be the annual cost of providing instruction to the average lower division history major in a public university. This cost includes such factors as the cost of his instruction in English, mathematics, and geography; his use of library and counseling services; and his share of campus administrative costs. The costing procedures commonly used in this type of per-student cost permit institutions to calculate and report separately their costs of instruction and their total or full institutional costs (including services and administration).*

*A detailed description of the standard procedures recommended by the Commission for deriving this type of per-student cost is contained in a separate staff report.

The Demand for Standard Costing Procedures

National standard procedures for determining per-student costs have become an important issue among state and federal policy makers for a variety of reasons. To understand the purpose of the Commission's recommendations, it is useful to review these reasons in some detail.

First, the capability of providing per-student cost information has become symbolic of good institutional management and the wise allocation and use of public resources in postsecondary education. Members of Congress, state legislators, and governing board members have expressed great interest in knowing what educational leaders can or cannot provide them in response to specific questions about the functioning of their institutions. Until recently, when legislators wanted per-student cost information to assist them in making judgments about budgets and other legislation, educators were unable to provide the information and were often unable to demonstrate a credible knowledge or understanding of the financial condition of their institutions. It is not surprising, therefore, that legislators and other public officials have been greatly concerned about the development of procedures to produce information that is comparable among similar institutions and, therefore, useful for institutional management and public policy making. The development of national standard procedures for determining per-student costs has become one of the symbols of the broader issue of the capability and credibility of institutional managers.

Second, there is the problem of allocating scarce resources among competing demands. Federal programs for the support of postsecondary education have grown rapidly in size and cost since the early 1960s, and hundreds of interest groups have sprung up around those programs to compete for each federal dollar. Because only about 25 percent of the federal budget is available for discretionary purposes and few of these groups are willing to support tax increases, most of the budget is determined before the debate begins. The

situation is much the same at the state level, except that the debate there usually focuses on a single annual budget bill. Since almost all postsecondary educational programs must compete with other programs for money, legislators who support educational programs believe they must have better information about such matters as per-student costs if they are to make convincing arguments for these programs.

Moreover, there is the difficulty of allocating available dollars for postsecondary education among the very large number of state and federal programs. The question is, which programs should receive how much public money? That question demands not only more information about the effectiveness of individual programs, but a much better idea of the most pressing financial needs in the various institutions to which these programs are directed.

Third, there is the belief that a method of producing information, particularly cost information, that is common to appropriate types of institutions, will help them to move toward excellence in meeting their basic objectives through improved management.

These attitudes and concerns of legislators and the public have not gone unnoticed by the educational community. Indeed, long before this matter became a public issue, institutions were attempting to develop cooperatively the means to produce meaningful and comparable per-student cost data. For example, the California-Big Ten Cost Study, which dealt with instructional and institutional costs, was begun as early as the mid-1950s. Many state systems of public higher education were exchanging comparable cost information internally by mid-1960. The Council of Graduate Schools undertook a study of costs of graduate education in 1970. The National Center for Higher Education Management Systems, which is concerned with costing and other management information needs and techniques, was established in 1971 as a result of earlier work in this area by the Western Interstate Commission for Higher Education. Each of these efforts produced some

useful cost data and a better understanding of the complex problems of expressing institutional resource use through costing and reporting.

Limitations of Current Costing Procedures

The development and use of standard procedures for determining per-student costs on a national basis are feasible. Comparable per-student cost information will be useful for certain aspects of institutional management and, to a limited extent, for the task of allocating resources among institutions. However, awareness of a number of problems causes the Commission to have some reservations about the desirability of the development and use of such standard procedures.

Perhaps the most important reservation arises from the fact that the comparable program and activity data needed to complement and help interpret per-student cost data are not now available and probably will not be for some time to come. It is, for example, a relatively easy task to employ national standards to determine the annual per-student cost of history departments in two institutions. It is quite another matter to determine whether the history departments of the two institutions are equal in quality. Without the latter information, there may be little meaningful information in comparing costs.

Although there are significant research efforts underway to provide information on the qualitative as well as quantitative outputs of education, current evidence suggests that it will be some time before the benefit side of cost-benefit analysis in postsecondary education will be as well developed as the cost side. Until it is, per-student cost information will be of limited use, even to those with knowledge of the programs and organizations studied. In the meantime, however, where cost data are generated by national standard procedures, they will seem to many to have considerable validity and credibility; and these data will be used to make comparisons, some of which may be inappropriate and misleading.

A second reservation is that per-student costs are usually measures of average resource use, and, unfortunately, this is not the information that would be most useful for institutional management and allocation of public resources. Most legislative decisions, for example, deal with how the next \$1 million of public revenues should be spent and with the marginal changes in educational outputs or program activities that should result. Marginal cost data would be much more useful than average cost data for those kinds of decisions, but comparable marginal cost data are not yet available.

A third reservation is that a single set of national standard procedures for determining per-student costs is not now, and perhaps never will be, capable of accurately reflecting the resources consumed in providing instruction to students across all institutional types. Currently available procedures work reasonably well for four-year liberal arts institutions, somewhat less well for community colleges that offer both occupational and academic programs (in which the division of costs call for significantly greater amounts of arbitrary judgment), and not very well at all for major research universities, which must sort out the complex interrelationships among instructional programs (at the undergraduate and graduate levels), research, and public service.

Other important reservations about the immediate implementation of current per-student cost procedures are these:

- ▶ Assuming the development of different sets of standards for complex, multi-purpose institutions, the task of rapidly estimating, with reasonable accuracy, the resources consumed in providing instruction to students from all segments of the institution is, and will remain for some time, both difficult and costly.
- ▶ Institutions that have not already automated their accounting procedures—and many institutions have not—will encounter

significant problems and costs when they implement costing procedures.

- ▶ Current costing procedures require the use of a standard enrollment unit, such as credit hour. While the choice of a standard unit does not have to be a barrier to innovation and flexibility in postsecondary education, it very often has been in the past.

The Advantages of National Standard Procedures for Determining Per-Student Costs

Although there are a number of disadvantages to the adoption of national standard costing procedures, there are also a number of advantages. First, as suggested above, the data produced by using national standard procedures would be significantly more useful than currently available non-comparable information. At present, most serious studies of institutional costs conclude with a recommendation for improved data definitions and reporting. The current lack of comparable data exists because there are no standard definitions and costing procedures. If there were a large body of data with markedly improved comparability, some of the critical issues of postsecondary education could be addressed analytically, and the improved analysis should lead to improved decisions.

Second, the adoption of national standards that could be applied to state as well as federal reporting requirements would ease the cost reporting burden for public institutions. The multiple definitions and procedures now used require institutions to collect and maintain data in several different forms and to support several different processing procedures in order to comply with various state and federal reporting requirements. The availability of national costing standards would preclude much of this unnecessary duplication, just as the Federal Information Processing Standards and the American National Standards have done in other areas.

Third, general agreement on costing procedures and a large data base (both with respect to the number of institutions and the period of time covered) would be very useful in analyzing resource requirements of alternative forms of education. Indeed, there will be a much better chance of addressing successfully the larger question of productivity in postsecondary education when costing procedures have been implemented on a scale large enough to provide sufficient data to support the necessary analysis.

Finally, since costing procedures have become one of the symbols of the issue of accountability, the availability of a large volume of relatively comparable cost data may enhance the credibility of decision makers for postsecondary education. The data, and the discussions arising from the data, may better illuminate the complex and subtle educational processes that often are not well understood by policy makers now.

Implementation of the National Standard Standard Procedures

It is one thing to develop and establish national standard procedures, however, and another to achieve their use throughout the postsecondary education enterprise. In the absence of periodic public reporting of per-student costs, for example, there can be no assurance that the procedures are being used. Similarly, only if reported information is applied to resource allocation and if reported costs are audited, can there be assurance that the national standard procedures are being correctly followed.

There are, however, several alternative ways to implement national standard costing procedures. These alternatives are:

1. Survey reporting. Through the use of an instrument such as the Higher Education General Information Survey (HEGIS),

institutions might be asked to report per-student costs as determined according to the national standard procedures. Since there is now no well-defined use for such a survey of per-student costs at the national level, a survey of this kind would be very expensive in relation to the benefits obtained. And since HEGIS reporting is voluntary, there would be no assurance that institutions would report accurately, if at all.

2. Mandatory reporting by recipients of federal funds. All institutions that receive federal funds might be required to report their per-student costs, again using HEGIS or some other instrument. The mandatory nature of such reporting might cause institutions to take the matter seriously; but unless the costs are to be audited or used for some resource allocation purpose, there would still be no guarantee of accuracy and full compliance.
3. Stratified sample survey and timely reporting of representative per-student costs. Institutions, carefully selected to represent all major types, might be surveyed to obtain a sample of per-student costs. The data would then be published as a report of representative per-student costs showing, by type of institution, the range of costs and key statistical measures for each institutional type. Such information would be useful to other institutions as well as to federal and state agencies. These institutions might be expected to use the national standard procedures voluntarily to compare their own costs with the representative data.
4. Voluntary reporting with financial incentives. Because the initial implementation of national standard procedures will be costly for an institution, a financial incentive for a period of up to three years would probably be helpful in

encouraging adoption of the procedures.* Since state postsecondary educational agencies are among the major users of cost-per-student information, consideration should be given to involving such agencies in the implementation of national standards. It may be appropriate, for example, as mentioned in alternative 4, to channel incentive payments to institutions through state postsecondary educational agencies, and to require national reporting of cost information through such agencies.

Whatever arrangements are made for implementing and using the national standards procedures for determining per-student costs, three final caveats should be noted. The first is that community colleges and noncollegiate institutions will not find the per-student costs generated by procedures using the current HEGIS Taxonomy of Instructional Programs as useful as they would if a taxonomy of disciplines better representing vocational and occupational programs were available. Second, major research universities will not find the procedures very useful in determining per-student costs until the interrelationships among research, public service, and instruction are better understood. Finally, proprietary schools and colleges must comply with other federal financial and consumer protection reporting requirements that enforce procedures that may be at variance with national standard procedures for determining per-student costs. This problem should be considered carefully before proprietary schools and colleges are added to the sample.

It should also be noted that the Commission recognizes the need for, but has not recommended, national standard procedures for costing in medical schools and allied health education. In view of the special efforts by the Institute of Medicine to develop such procedures (which will be completed in the next several months), the procedures recommended by the Commission have not been modified to provide the special treatment necessary in this field.

*See the discussion of the implementation in the NCFPE staff report entitled, *A Proposal: Interim National Standard Procedures for Deriving Per-Student Costs in Postsecondary Educational Institutions.*

Strengthening Accountability

Historically, institutions of postsecondary education have employed a variety of techniques to meet the public's expectations with regard to accountability. In a fiduciary sense, they have carefully accounted for the monies allocated for their use and appear to have done so in a manner satisfactory to those who provide their financial support. Through voluntary cooperative efforts sponsored primarily by the American Council on Education and the National Association of College and University Business Officers, effective guidelines for institutional accounting have been established and brought up to date regularly. But this does not appear to be sufficient for the new and broader demands for accountability. The vast majority of institutions have followed these procedures, and they are to be commended for this effort.

In addition, institutions and associations are continuing to improve fiduciary accounting. The American Institute of Certified Public Accountants, in cooperation with the National Association of College and University Business Officers, has published a set of "Audit Guidelines" for colleges and universities that should further improve institutional accounting and reporting. Additional work by these two organizations in cooperation with the National Center for Higher Education Management Systems through a Joint Accounting Group should lead to institutional financial reporting similar in form to annual corporate reports. Regularly audited financial and supporting information should significantly improve the public's ability to understand and evaluate the financial status of colleges and universities and contribute to a better understanding of the financial condition of postsecondary education generally.

A new set of circumstances has evolved during the past twenty years, however, to increase public expectations with regard to accountability. Postsecondary education is currently an enterprise serving individuals and society in many significant ways, and it is now on its way from mass education to becoming a universal system. During earlier periods of

rapid industrial and technological growth, the benefits of postsecondary education were generally apparent, and institutions were seldom asked to demonstrate the worth of their labors. In the late sixties and early seventies, however, as competition for limited public resources increased, the public began to question the role of collegiate institutions, saying, in effect, "What has higher education done for us lately?" The people and their representatives wanted to know not only if institutions were using their monies for the purposes for which they were intended, but also if the monies were being used wisely—that is, if they were being spent efficiently and effectively to accomplish desired objectives.

Many institutions sought to respond to those new expectations by improving their reporting systems, but they faced two significant problems. First, they lacked the analytical tools to do so, and, second, they seldom had the money or staff to devote to developing such tools. It has been clear to most institutional administrators, nevertheless, that the development of such tools may be in their best interest, for the same tools that will enable them to be more accountable may possibly also help them to strengthen their managerial capabilities, which they must do in this era of scarce resources.

Since most individual institutions could do little by themselves to develop these new tools, several cooperative efforts were begun with support from the federal government and private foundations. Some of these efforts are:

- ▶ The work of the American Council on Education in analyzing the impact of postsecondary education on students;
- ▶ The efforts of the UCLA Center for Evaluation to develop a College and University Evaluation System;
- ▶ The work of the Center for Research and Development in Higher Education at the University of California at Berkeley in analyzing the public policy implications of the variations in state support for collegiate institutions;

- ▶ The Ford Foundation financed studies in college and university administration that supported basic research in the development of new management tools and procedures;
- ▶ The National Higher Education Laboratory's special studies of management organizations;
- ▶ The work of many state agencies in seeking to improve the means by which institutions are held accountable to the public and legislators; and
- ▶ The work of the National Center for Higher Education Management Systems in establishing commonly agreed upon standard data definitions, information structures, and data handling procedures to facilitate the exchange of information among institutions and to provide computer programs to simplify data handling and analysis.

Virtually all segments of postsecondary education were involved in one or more of these efforts. Moreover, several additional efforts are now underway, and those involved in these efforts are cooperating in an attempt to respond appropriately to the new expectations for greater accountability.

The Elements of Accountability: Current Expectations

The current demand for greater accountability assumes that the previous efforts of fiduciary accounting and reporting will be continued and, to the extent possible, improved. In addition, the new expectations for accountability call for:

1. Accounting for the use of resources in relationship to the achievement of specific objectives—funders may want to know how much institutions spend (including cost per student) to achieve an objective and to what extent the objective is achieved.

2. Demonstration that the resources available are used efficiently—funders want to know if the resources are being used in order to achieve maximum productivity; and
3. Evidence that institutional objectives selected reflect the needs of citizens in their roles as students, society, and funders—and it cannot be assumed that their objectives are always identical.

The Roles of Information in Improving Accountability

As has been suggested earlier, the demand for national standard procedures to determine costs per student and cost-per-student information is symbolic of the new expectations for accountability. The cost per student is, however, only a small portion of the information required to respond to the new expectations and is not, by itself, very useful. For example, if it is reported that the average annual cost per biology major in one institution is \$2,320 and in another \$1,400, we still know very little, for we do not even know how the figures were derived. The first institution may be adding into its cost a large debt service on a new classroom building, while the second institution may not have included any capital expense because all its buildings are paid for (debt free). If the information were produced using national standard procedures, we would know that the numbers were calculated in a consistent manner. We would still not know very much, however, because we would not know whether the knowledge and skill levels of biology majors in the two institutions were the same, if one school's major were as valuable as the other's, or how this result could be demonstrated. Detailed output information is required to answer such questions, but this type of information is difficult to develop. Cost-per-student information will be of limited value, however, until such output information is available.

In addition, however, if the per-student cost numbers and the qualitative indicators are comparable, it is then necessary to know what items of cost (for example, faculty salaries) are higher for one institution than for the other, and why. It is also necessary to know whether these cost differences represent qualitative differences in resources used or are a result of regional price differences or poor procurement practices. To answer such questions, we need information on the costs of the various types and qualities of resources used and how these costs have varied over time.

It must be pointed out that cost per student is not the same as cost per additional student. Many of the expenditures involved in the cost per student do not change when one or a few students are added. Thus, it is also necessary to know the additional costs associated with increasing the number of students and the reduced costs associated with decreasing the number of students—the marginal cost per student.

It is furthermore necessary to ask: "Is the instructional cost per student linked in some way to activities in a research, public service, or other program?" For example, if the financing level of the biology research program is changed, would this change the cost per biology student? The answer is probably yes. Clearly, there is need for information and analytical techniques to make possible an understanding of those relationships.

Many other illustrations might be provided to demonstrate that cost per student is only one part of a broader information need and that national standard procedures are needed in this broader context as well. There are other types of information which can be used. Traditional indicators include the number of library books per student, publications of each faculty member, cost per student for student services, and the ratio between administration and departmental expenses. Likely new descriptions would be retention and completion rates, measures of student satisfaction, employment rates and salaries for graduates, student scores on examinations, and indices of

the social maturity of students. National standard procedures would not only permit comparison of cost data, they would also reduce the expense of producing such information and simplify communication among institutions and their funders.

Obstacles to Improved Accountability

There are, however, several major obstacles to improved accountability. Most of them are currently being addressed to some extent, but an expanded effort is required if the new expectations for accountability are to be met in a reasonable period of time. The most important obstacles are these:

1. There is no effective agency or organization for determining, maintaining, and implementing national standard procedures for producing the array of information required to respond and to the new expectations for accountability. It is true, of course, that individual institutions and consortia are working to develop an understanding of what needs to be done, and some of these efforts have resulted in mutually agreed upon standard procedures. On occasion, these procedures have been used as the basis for the HEGIS reports, thus creating de facto national standards through national reporting. But there is no agency specifically empowered to work with institutions, states, and federal agencies to arrive at such standards for postsecondary education.
2. Several important problems concerning the reporting of institutional information and its use in policy analysis remain unresolved and need special research and development attention. Among the unanswered questions are:
 - a. What are the outputs of postsecondary education?
 - b. How and why do individuals choose to participate in postsecondary education?
 - c. How do institutions respond to public policy and financing decisions and to changes in consumer behavior?

- d. How do multifunction (instruction, research, and public service) institutions operate, and how do they differ from single purpose institutions?
- e. What marginal analysis techniques can be developed for postsecondary education?

While most of these problems are being studied by individual institutions and organizations, there is as yet no concerted and coordinated effort of research to consider the broad interests of institutions, the states, and federal agencies in the eventual development of meaningful national standard procedures for institutional reporting.

- 3. There is a serious shortage of trained personnel to develop and implement modern planning and management techniques for postsecondary education, and to assist the institutions and state administrators and policy makers with their use.
- 4. The federal effort to collect and disseminate information about postsecondary education is inadequate in view of current information processing technology. There are serious delays in the collection and reporting of the information that is now gathered, and these delays greatly reduce its usefulness.

Information on postsecondary education resources, operation, and outputs should be made available in at least three forms. First, and most important, the information should be available through terminal access to a computerized data base maintained by the collecting agency. Appropriate levels of editing should be used to assure the proper balance between timely availability and certification of accuracy. Second, information should be available in machine readable form on computer tapes in compliance with federal information processing standards. Third, information should be available in published report form with a format that is consistent from year to year.

Information bearing upon the full spectrum of post-secondary education—not just the narrow spectrum now deemed useful for program management in the Office of Education—must be collected. Data on the noncollegiate as well as the collegiate sector should be included, and they should reflect the full scope of public sector involvement.

To deal effectively with these obstacles, it is clear that the federal government must lend its strong support to a national center for educational information. It is not important that this center be public or private, a new agency or one that exists now, but that it be structured to collect, organize, and disseminate essential information in the most expeditious manner possible. The specific functions of the national center should be:

1. Development and promulgation of national standard data definitions, information structures, and data handling procedures.
2. Collection (with the assistance of state postsecondary education planning agencies), analysis, and dissemination of data on education that are necessary to support policy making by institutions, districts and systems, state governments, and the federal government. The data should be made available freely to any person or organization except as necessary to protect individual privacy.
3. Dissemination of data through regularly published reports, in computer-printed machine-readable form, and through terminal access to a computer data base under the jurisdiction of the proposed center. To carry out these functions effectively, the center needs to be protected from the possibility that its data collection effort will be subordinated to the particular demands of those who must administer specific federal programs. It also must be given responsibility and adequate resources to collect information

covering the full scope of activities affecting postsecondary education, and receive regular and formal advice from all the major parties concerned with data collection and reporting in this field. Finally, the center should be free from requests for policy analysis and unwarranted pressure from those engaged in policy analysis, so that information will not be collected and arranged to serve special purposes or interests.

Conclusions

1. The most useful unit cost data for administrators and policy makers are the direct, indirect, and full (direct plus indirect equals full) annual per-student costs of instruction for each major field of study, level of instruction, and type of institution.
2. Cost-per-student calculations are technically possible for most instructional programs in most institutions; however, the currently available procedures do not fully reflect the complexities of those institutions that offer a combination of instruction, research, and public service programs or a combination of vocational and academic programs.
3. Policy makers should not rely solely on annual per-student costs of instruction for the development of policy in postsecondary education.

Recommendations

1. The federal government should provide continuing leadership in encouraging and developing national standard procedures, appropriate to each type of institution, for calculating the direct, indirect, and full annual cost of instruction per student by level and field of study.

2. Interim national standard procedures for calculating those costs per student should be adopted by the federal government to be implemented by institutions on a voluntary basis. Cooperating institutions should receive financial assistance to cover costs related to implementation of the interim procedures and reporting their cost information. (The Commission has suggested interim national standard procedures, which are described in a separate staff document.)
3. Federal support should be provided for the development and reporting of financial and program data to supplement and extend the cost-per-student data. Examples of suggested additional financial data may be found in this chapter.
4. The federal government should ensure that the data base assembled by this Commission is updated, maintained, and made available to appropriate public and private agencies.
5. The federal government should support a national center for educational information with the responsibilities and characteristics listed in the text of this chapter.

CHAPTER 9

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

Postsecondary education, like the entire American society, has changed significantly during the past twenty years. To respond to this change, the first tasks of those charged with the financing of postsecondary education are to put aside outdated perceptions, look anew at the objectives of postsecondary education, and examine the methods by which those objectives may be accomplished. Those who propose changes in financing must be able to offer reasonable assurances that what they propose will produce the intended results.

For this reason, the Commission and its staff have placed the highest priority on assembling pertinent data and using them to analyze alternative policy proposals in a systematic way. Thus, while the Commission believes its recommendations to be important, so too are the substantive findings on which they are based and on which others may base their own recommendations. Therefore, this chapter includes not only the Commission's recommendations, but also those of its conclusions that it believes to be important considerations for the resolution of policy issues in the future.

Postsecondary Education in a Changing Society

Conclusions

1. Postsecondary education in the United States is a large enterprise including more than 2,900 traditional collegiate institutions serving some 9.3 million students and an additional 7,000

noncollegiate technical, vocational, and proprietary institutions serving approximately 1.6 million students. Postsecondary education also includes an estimated 3,500 additional institutions and organizations (serving an unknown number of students) as well as a great many other noninstitutional learning opportunities (in which as many as 32 million people may participate).

2. Recognizing the broad scope of postsecondary education, the Commission has adopted for the purposes of its study the following definition, encompassing the 2,900 traditional collegiate institutions and 7,000 noncollegiate institutions:

Postsecondary education consists of formal instruction, research, public service, and other learning opportunities offered by educational institutions that primarily serve persons who have completed secondary education or who are beyond the compulsory school attendance age and that are accredited by agencies officially recognized for that purpose by the U.S. Office of Education or are otherwise eligible to participate in federal programs.

3. Total enrollment of students from the traditional college-age group (18-21) in the collegiate sector will continue to increase during the 1970s but at a rate reduced from that of the 1960s. During the 1980s, however, total enrollment of such students is likely to decline, although some sectors may experience enrollment growth. Data necessary to project enrollment from other age groups and in the noncollegiate sector are not available.
4. Ethnic and racial minorities, persons from low-income families, women, and individuals of all ages seeking continuing professional development or retraining will make up an increasing proportion of total enrollment in postsecondary education.

5. The new 18-year-old "age of majority" and emerging changes in high school programs are likely to affect postsecondary education in major ways that are not yet easily determined.
6. Institutions of postsecondary education will be under strong pressure to increase their productivity to match rising costs.
7. A number of other important changes are taking place in the society and among the institutions of postsecondary education that will have an important bearing on the level and structure of financial support necessary to serve the interests of society and individuals. These changes are described in Chapter 1.

Recommendations

1. The Commission recommends that data should be collected on those sectors of postsecondary education other than those identified herein as the collegiate and noncollegiate sectors.

Objectives for Postsecondary Education

Conclusions

1. A set of objectives for postsecondary education in the United States is necessary for evaluating alternative proposals for financing postsecondary education.
2. A set of criteria for each objective is needed to measure the degree of achievement of the objective.

Recommendations

1. The Commission recommends the adoption of the following eight objectives:
 - a. Each individual should be able to enroll in some form of postsecondary education appropriate to that person's needs, capability, and motivation.

- b. Each individual should have a reasonable choice among those institutions of postsecondary education that have accepted him or her.
 - c. Postsecondary education should make available academic assistance and counseling that will enable each individual, according to his or her needs, capability, and motivation, to achieve his or her educational objectives.
 - d. Postsecondary education should offer programs of formal instruction and other learning opportunities and engage in research and public service of sufficient diversity to be responsive to the changing needs of individuals and society.
 - e. Postsecondary education should strive for excellence in all instruction, research, public service, and other learning opportunities.
 - f. Institutions of postsecondary education should have sufficient freedom and flexibility to maintain institutional and professional integrity and to meet, creatively and responsibly, their educational goals.
 - g. Institutions of postsecondary education should use financial and other resources both efficiently and effectively and employ procedures sufficient to enable those who provide the resources to determine whether those resources are achieving desired outcomes.
 - h. Adequate financial resources should be made available to permit the accomplishment of the forgoing objectives. This is a responsibility that should be shared by a combination of public and private sources, including federal, state, and local government, and by students, parents, and other concerned individuals and organizations.
2. The criteria used by the Commission in measuring the achievement of these objectives have been helpful in the analysis of alternative

financing plans, but additional effort should be directed toward improving these criteria.

Current Financing Patterns

Conclusions

1. In fiscal year 1972, the income of postsecondary educational institutions was about \$30 billion. Of this \$30 billion:
 - 21 percent was received from students and parents;
 - 31 percent was received from state and local governments;
 - 27 percent was received from the federal government;
 - 9 percent was received from gifts and endowment income; and
 - 12 percent was received from auxiliary enterprises and other activities.
2. The level and character of financial support varies greatly from state to state and institution to institution, and this variation must be taken into account in developing effective national programs and policies.
3. In 1972, public financing for postsecondary educational expenditures at institutions amounted to \$17.2 billion. Of this amount \$4.2 billion, or 26 percent, was provided through students and \$13.0 billion, or 74 percent, was provided through institutions. An additional \$1.1 billion in public support was provided to students for living costs and education-related expenditures.

Recommendations

1. The Commission recommends that comparable financial information for the entire postsecondary education enterprise be collected and reported in a timely and systematic fashion.
2. The Commission further recommends that financial information associated with institutions of postsecondary education be collected and reported in close cooperation with the states.

Assessing the Achievement of the National Objectives

Conclusions

1. The postsecondary education objective of student access, when measured in terms of income, race, ethnic group, sex, and geographic location, is not yet accomplished.
 - a. The participation in postsecondary education of individuals 18-24 years of age from families earning less than \$10,000 per year is 17.3 percent while the corresponding participation rate of families earning more than \$10,000 per year is 38 percent.
 - b. The rates of participation in postsecondary education for individuals from certain racial and ethnic minorities are far below the participation rates of other Americans.
 - c. Women are also underrepresented in postsecondary institutions, constituting 51 percent of the 18-24 year age group but only 44 percent of undergraduate enrollment and 39 percent of graduate enrollment.
 - d. The location of collegiate institutions best serves those individuals who live in small metropolitan areas. Those who live in large metropolitan areas are only somewhat better served than those who live in rural areas. Lack of data on noncollegiate institutions does not permit us to draw corresponding conclusions for the noncollegiate sector.
2. Family income alone is not the only important variable in determining an individual's decision to seek postsecondary education. Parental education and occupation may be even more important in affecting postsecondary enrollment and access measures. Among other factors, rigid high school tracking is the single most significant controllable factor.

3. There is inadequate information to enable the Commission to make a firm judgment concerning the degree of student choice. Further research could provide a more complete understanding of the interactive processes of admission, financial aid, and enrollment. Aggregate data from both the public and private sectors would suggest, however, that those students who do obtain access to some institution of postsecondary education are distributed proportionately according to income level within both sectors.
4. The extent to which students are assured an opportunity to achieve their educational objectives, once enrolled, is particularly difficult to measure. Program completion rates have been examined as one limited measure for this objective, and the cost of attendance does not appear to be a controlling variable in program completion. For many students, however, program completion is an inappropriate measure of opportunity, particularly for those enrolled in any occupationally-oriented institutions, where students may be more concerned with receiving particular instructional services than with completion of a degree or certificate program.
5. There are many program offerings available in a variety of different sizes and types of institutions. Nevertheless, the existence of a multiplicity of programs does not necessarily provide diversity, because the programs of many institutions are very similar. To the extent that individuals may wish to enroll in programs with different characteristics, diversity may well be limited.
6. Although the Commission is aware of a variety of efforts to support and measure excellence in postsecondary education, it finds excellence difficult to evaluate and finds no adequate measures to fully assess the level of achievement of the objective of excellence.

7. Current evidence indicates that institutions that receive substantial financial support from a variety of public or private sources are neither more independent nor better able to achieve their educational objectives than those primarily dependent on a single source of support. The relative availability or scarcity of financial resources is probably the most significant factor affecting institutional independence.
8. Historically, institutions have attempted to meet their responsibilities for financial accountability to their major sources of financial support through a variety of techniques. Many of the information and analytical procedures now required for the efficient and effective allocation of resources in increasingly complex institutions and for the determination of postsecondary education policy are not readily available, and those that are available are not widely used.
9. Although the financing of postsecondary education is a responsibility shared by many sources, the total amount of resources currently made available is not adequate to accomplish fully each of the objectives identified by the Commission.

The Incidence of Financial Distress
Among Institutions of Postsecondary Education

Conclusions

1. There is no generally accepted definition of financial distress used in the postsecondary education enterprise. For the purposes of the Commission's analysis, however, "financial distress would exist in the postsecondary education enterprise or in one of its major sectors when the lack of money and other resources prevented the desired degree of achievement of national postsecondary objectives."

2. No generally accepted standards or uniform criteria are available to ascertain the existence or extent of financial distress in postsecondary education.
3. The Commission concludes that an evaluation of financial distress in postsecondary education should incorporate at least three sets of indicators: factors concerning institutional financial status, factors related to the financing of the total postsecondary education enterprise, and factors external to postsecondary education.
4. Based on an analysis of selected statistical evidence, the financial status of the postsecondary education enterprise is not substantially jeopardizing the achievement of postsecondary education objectives. Some postsecondary institutions, however, are already in financial distress; and, if present patterns and conditions of financing continue, there is a high probability that such distress will occur in several sectors of postsecondary education as well.

Recommendations

1. National standard indicators should be developed to determine the relative financial status of the different types of postsecondary educational institutions. The Commission report suggests a number of such indicators for consideration.
2. When there are substantial shifts in public financing of specific programs, they should be effected over a reasonable period of time. Appropriating funds for all education programs one year in advance of spending would be especially helpful.
3. The programmatic interrelationships among research programs, graduate education, and undergraduate education should be studied so as to understand better the induced financial effects of individual program financing decisions on an institution.

4. Grants and contracts with institutions of postsecondary education either should include long-term programmatic support that recognizes the interrelationships among the various functions of the institution or should cover the costs associated with purchasing the service as if it were provided separately from other functions within the institution.

A Framework for Analyzing National
Policies for Financing Postsecondary Education

Conclusions

1. Because the arrangements for financing postsecondary education are complex, the Commission believes that policy makers will find a comprehensive analytical framework useful in developing financing proposals that will accomplish the objectives they seek.
2. The Commission found useful one such analytical framework employing the following ten major elements: objectives, criteria to measure the achievement of objectives, a series of assumptions about the society and the institutions of postsecondary education, a set of general policies to accomplish the objectives, financing mechanisms to carry out the policies, specific financing programs, an extensive data base for postsecondary education, a method for estimating student and institutional responses to changes in financing, a set of measurements to describe the achievement of the objectives, and, finally, a judgmental review of the financing mechanisms and programs in relation to the objectives.

Recommendation

The Commission recommends that federal, state, and other policy makers for postsecondary education use an analytical framework similar to that described in this report for considering financing proposals.

An Analysis of Alternative Financing Plans

Conclusions

The Commission concludes that an analytical framework, similar to that described in Chapter 6, provides an instrument that can significantly improve the capacity of policy makers to make decisions about the financing of postsecondary education.

However, such frameworks are difficult to develop, as demonstrated by the limitations of the analytical model, one element of the framework. For although the analytical model provides useful estimates with respect to student response to pricing decisions, the model does not, because of deficiencies, estimate institutional responses to a variety of financing mechanisms designed to aid institutions.

Recommendation

The Commission strongly recommends further research on, and development of, analytical frameworks and models similar to those used by the Commission. The Commission also recommends further collection and analysis of data which, although currently not available, would be useful for the evaluation of the impact of major financing alternatives on the achievement of national objectives, particularly objectives related to institutions, such as diversity and excellence.

National Standard Procedures for Institutional Costing and Data Reporting

Conclusions

1. The most useful unit cost data for administrators and policy makers are the direct, indirect, and full (direct plus indirect equals full) annual per-student costs of instruction for each major field of study, level of instruction, and type of institution.

2. Cost-per-student calculations are technically possible for most instructional programs at most institutions; however, the currently available procedures do not fully reflect the complexities of those institutions that offer a combination of instruction, research, and public service programs or a combination of vocational and academic programs.
3. Policy makers should not rely solely on annual per-student costs of instruction for the development of policy in postsecondary education.

Recommendations

1. The federal government should provide continuing leadership in encouraging and developing national standard procedures, appropriate to each type of institution for calculating the direct, indirect, and full annual cost of instruction per student by level and field of study.
2. Interim national standard procedures for calculating those costs per student should be adopted by the federal government to be implemented by institutions on a voluntary basis. Cooperating institutions should receive financial assistance to cover costs related to implementation of the interim procedures and reporting their cost information. (The Commission has suggested interim national standard procedures, which are described in a separate staff document.)
3. Federal support should be provided for the development and reporting of financial and program data to supplement and extend the cost-per-student data. Examples of suggested additional financial data may be found in Chapter 8 of this report.

4. The federal government should ensure that the data base assembled by this Commission is updated, maintained, and made available to appropriate public and private agencies.
5. The federal government should support a national center for educational information with the responsibilities and characteristics listed in the text of Chapter 8.

The primary purpose of the efforts of the Commission has been to set the context for debate on the financing of postsecondary education. In this regard, we have neither selected nor recommended any single financing plan; nor by presenting and analyzing several alternatives do we imply that the alternatives are all equally acceptable or that these are preferable to other plans not analyzed. These alternatives were examined for analytical purposes only.

It is the hope of this Commission, however, that the data and analytical framework developed by the Commission will improve the policy decisions of institutions, governments, and private organizations. There are many additional topics that the Commission would like to have addressed—and would have addressed had it had available a data base and analytical capacity at the beginning of its work. Nor is this report intended to be a definitive product. It is a beginning for those who will continue working in this critical area of public policy.

Comments

by Individual Commissioners

COMMENTS BY INDIVIDUAL COMMISSIONERS

PREFACE

The Commission's report was unanimously endorsed. As with most study efforts, the Commission would like to have done much more, but time and circumstances did not permit. When the Commission commenced its work, limited time and resources forced it to decide whether to focus its efforts on reaching conclusions concerning particular financing plans or whether to develop the capacity to analyze many alternative financing plans. The Commission chose the latter course rather than analyze alternative financing plans for the purpose of arriving at a particular financing plan to be recommended to the President and Congress.

The Commission felt it appropriate that Commissioners should have the opportunity of expressing their individual views, based on their experience and the information assembled by this study. This section of the report is reserved for that purpose. Some Commissioners have chosen to emphasize specific conclusions and recommendations of the Commission. Other Commissioners have provided commentary on the limitations, from their individual perspectives, of the analytical framework.

It is hoped that this report, the analytical framework, and the ongoing information capacity developed by the National Commission will provide a basis for meaningful dialogue among policy makers in postsecondary education.

Comments of Commissioner Ernest L. Boyer

Joining in Agreement Are:

Commissioner Marian W. LaFollette;

Commissioner Louis P. Rodriquez;

Commissioner John W. Porter; and

Commissioner Ruth C. Silva

The Financing of Postsecondary Education

A Framework for Future Planning

The National Commission on the Financing of Postsecondary Education has completed its work, and the report has been unanimously endorsed. The Commission has responded imaginatively and well to its legislative mandate. Especially commendable has been the development of an analytical framework which makes it possible for policymakers to assess, at least in part, the impact of a financing proposal *before* it is introduced.

While applauding the report, I am convinced we have yet another obligation to fulfill. During our study it became quite clear to the Commission that the postsecondary education financing debate has generated misunderstandings at all levels. There are strong advocates on all sides, and each new proposal seems to generate more heat than light.

Given this confusion, I believe we should speak to some of the hotly contested issues, not by introducing our own detailed financing plan, but rather by setting forth a series of propositions on which policymakers might agree or disagree.

We have worked 12 months on this timely topic. We gathered information, heard testimony from many witnesses, and discussed together the findings of our study. It seems appropriate, if not essential, that we share some of the convictions that have emerged and make clear that in our own opinion the various financing strategies discussed in the report are not of equal merit.

Therefore, I wish to append to our formal report a series of statements—call them guiding principles, if you will—which may help to sharpen the policy issues to be faced. Many of the propositions simply summarize current practices, while others are not as broadly endorsed. It is my opinion, however, that these statements will be helpful as a partial structure within which various financing proposals can be tested and will serve in part as a framework for future planning.

I. STATE AND LOCAL SUPPORT OF POSTSECONDARY EDUCATION

- A. State and local governments have the primary public responsibility of providing basic institutional aid to postsecondary education.
- B. Public institutions, as a general rule, should receive their primary institutional support from state and local governments.

Such support should be adequate to maintain an excellent and diversified network of two-year, baccalaureate and graduate institutions in each state.

State and local support should be sufficient to make it possible for public institutions to provide two-years of postsecondary education to all qualified students, preferably at no cost to the student, but at least at tuition rates not exceeding present levels.

Each state should provide public institutions with the financial assistance needed to support a diversified upper baccalaureate and graduate educational program, although students might contribute moderately to the support of this more advanced, higher cost instruction.

State and local governments should share with the federal government in the funding of basic research and public service programs at public institutions.

- C. Private institutions, while receiving their principal support from non-public sources, should be recognized as essential educational resources by each state.

Direct institutional grants to private institutions should be seriously considered by the several states. The method of providing such direct aid to private institutions, while varying from state to state, should, nonetheless, be linked to the performance of specifically identified public missions.

Four such arrangements are suggested:

High priority educational programs: Private institutions might receive public aid in support of high priority instructional programs, such as the expansion of medical and dental education, contractual support for specialized degree offerings not available in the public sector, or for the joint purchase and use of resources of high cost services such as library acquisitions and computer facilities.

Cost-of-Instruction Allowances: Private institutions might receive cost-of-instruction allowances for educating certain special categories of students, such as veterans, the handicapped and the financially disadvantaged.

Expansion of Enrollment: Private institutions might receive public support for increasing their enrollment at the lower or upper levels and thus better utilizing available facilities within the private sector.

Lower Division Students: Private institutions might receive a grant for each state resident they enroll at the freshman and sophomore levels, thus joining with the public sector in the fulfillment of the commitment to two years of postsecondary education.

- D. Both public and private institutions should accept procedures which provide reasonable accountability while at the same time preserving essential institutional integrity. Private institutions receiving public funds should accept financial and programmatic reporting systems, which while not as extensive as those required of public institutions, nonetheless allow professional judgments to be made concerning their financial conditions and the quality of their services.
- E. Ranges of acceptable funding levels for private institutions receiving public support might cooperatively be developed to meet the imperatives of public accountability while protecting institutional flexibility and identity.

II. FEDERAL SUPPORT OF POSTSECONDARY EDUCATION

- A. The federal government has a critically significant supportive role to play in the financing of both public and private postsecondary education.
- B. Federal aid to postsecondary education should complement the financing obligations of state and local governments. Specifically, such funding should support programs which are truly national in character and transcend the interests or needs of any given state or region.

Four major federal obligations to postsecondary education are proposed.

Equality of Access: The federal government should promote equality of access to postsecondary education through grants to students and institutions which will enable both full and part-time students from low and middle income families to enroll in and complete an appropriate postsecondary education program.

The federal government also should subsidize work-study and loan programs for those students, especially at the upper and graduate levels, who must finance their own education.

Research and Graduate Education: The federal government should selectively support, through direct institutional grants and aid to graduate students, high quality research and graduate education in order to develop the nation's intellectual resources and to identify and resolve problems which transcend the several states.

High Priority Professional Fields: The federal government should support through institutional and student grants, a limited number of high priority professional fields of study (for example, medicine) which are directly linked to national needs.

Educational Reform: The federal government should provide grants to institutions to stimulate reforms in education which will make it possible for institutions to alter their instructional and managerial practices in response to major social and educational change.

III. STUDENT AND FAMILY SUPPORT OF POSTSECONDARY EDUCATION

- A. Students and their families should share somewhat in the cost of postsecondary education, in both the public and private sectors, although the level of such support will differ in each.
- B. In the public sector, income through tuition and other fees should remain a secondary source of institutional support.

Tuition for the first two years of public education beyond high school should be free or at least be stabilized at the present level.

Beyond the first two years, a tuition schedule, graduated by level, might be introduced. Such a schedule, however, should remain low in cost (a maximum of approximately one-third of instructional costs might be a useful bench mark) and should increase only at the annual rate of inflation.

- C. In the private sector, income through tuition should remain the primary source of institutional support.

A program of federally financed student assistance, augmented by the states, should be provided to low and middle income students to offset somewhat the higher tuition charges of private institutions.

- D. In both public and private sector institutions, students and their families should be expected to pay according to their financial ability for most of the cost of ancillary services (parking, health care) which are only indirectly related or unrelated to their basic instructional program.

IV. PHILANTHROPIC SUPPORT OF POSTSECONDARY EDUCATION

- A. The philanthropic contributions of alumni, foundations, organizations and individuals to both public and private institutions should be expanded.
- B. The federal and state governments should maintain appropriate tax incentives to assure the continuation and expansion of philanthropic contributions to postsecondary education.
- C. Contributors to postsecondary education should be encouraged to include unrestricted gifts in their donations in order to permit maximum flexibility in the use of such income and to preserve institutional integrity.

V. CONCLUSION

In summary, I believe the time has come to develop a cohesive and rationally developed set of principles for financing postsecondary education. This comprehensive financing strategy should maintain a constructive balance both within and between the public and private sectors, while enhancing the diversity of our institutional missions.

The preceding propositions are intended to be illustrative, not exhaustive, and are set forth here to help sharpen our thinking and to enhance rather than detract from the Commission's report.

Comments by Commissioner Dan Martin

Our report is the product of highly intensive labor during the past year by the Commission and our extraordinarily able and creative staff. Our emphasis on building a format for the systematic consideration of public policy on postsecondary education finance rather than on recommending specific policies is a strong and fitting response to our statutory assignment.

Prudence required the inclusion of numerous caveats and apologies for the crudeness of our procedure for analyzing policy recommendations, but those reservations should not obscure recognition of the Commission's landmark contribution. I endorse the report fully and submit the following comments not as dissents but as detailed affirmations.

1. Some leaders of our report will be disappointed that we made no detailed recommendations about public policy for financing postsecondary education. A closer reading will reveal that we reached a highly significant general conclusion which should be considered widely, seriously, and carefully. A central element in the debate about financing postsecondary education has been the question whether institutional aid or direct student aid is better public policy for accomplishing our numerous objectives for postsecondary education, particularly for increasing student access. Institutional aid through direct appropriations allows institutions to charge students none of the cost of their education or a low percentage of that cost. The student aid approach allows targeted price reduction. The Commission has demonstrated that *student aid is more effective than institutional aid* as a vehicle for increasing student access, our most compellingly unfulfilled objective.

Strong cases can be made that deploying public funds into direct

student aid instead of institutional support will also improve our attainment of student choice, educational diversity and flexibility, institutional excellence, institutional independence and institutional accountability. Student aid is by no means a panacea, and it should not be the only channel through which public funds flow to the support of postsecondary education. However, under current policy, about 85 percent of all expenditures for postsecondary education go to institutional support, leaving 15 percent for direct student aid. A very large fraction of the student aid expenditures comes from the federal government. Alterations in this ratio should be made, particularly by state governments.

2. *Postsecondary* education is an awkward term for the industry our report considered. *Adult* education is a better, more economic and more descriptive, label. As eighteen becomes the age of majority, practically all the customers served by this industry will, by legal definition, be adults. This condition, along with the growing participation of persons beyond the traditional college-attending age, makes expending the organizational assumptions underlying elementary and secondary education increasingly inappropriate.

Adult education, unlike elementary and secondary education, is not compulsory, its purposes and programs are much more diverse than the basic education goals of our schools. Adult students can and should be expected to exercise responsible choices in the location, content and style of their education, and they should be expected to pay an equitable portion of the cost of their education.

Any movement of public policy which imposes on adult education the structures and operating assumptions taken from elementary and secondary education will work against the attainment of our

national objectives for postsecondary education.

3. During the past decade or two, our institutions of postsecondary education were challenged with the need to expand rapidly without sacrificing their traditional quality. The next fifteen years are likely to present a much more difficult challenge than providing larger quantities of the same services. Ahead lie the need to serve new members and new missions with new institutional structures and the need to contract additional services without reducing their quality. These basic adjustments will come at a time when financial flexibility is low. Consequently, the need for special experimental funds is authentic and large.

The HEW Fund for the Improvement of Postsecondary Education is an important structure for supporting the institutional flexibility we urgently need. Its appropriation should be increased sharply, and state governments should consider creating analagous agencies.

4. The review of student response conducted by T. Engen revealed that students are little concerned with the great attention given in current public debate to the distinction between public and private collegiate institutions or with the elaborate proposals or different financing patterns based on institutional ownership. The students' concerns focus more on the responsiveness of any institution to their educational objectives.

Simple access to institutions which might or might not provide useful and rewarding experiences has little attraction.

5. Financing patterns become significant to students only insofar as they influence institutional programs and the level of charges students actually pay. Increasing the rate of direct student financial aid as a method for financing postsecondary education serves both to increase institutional responsiveness and to reduce student expenditures on an equitable basis.

6. The Commission deliberately did not address the special problem of financing health professional education. Its high cost and society's special needs for health professional manpower placed this field outside the analytic approach we have taken. The forthcoming National Academy of Sciences Institute of Medicine study will be a helpful guide to comprehensive policy formulation for this segment of postsecondary education.
7. Additional methods of assisting students who wish to attend proprietary schools should be developed. These institutions are playing an increasingly important role in providing postsecondary educational opportunities. They offer highly varied, flexible training programs without receiving direct tax support or exemption from taxation. Their service to society rather than the nature of their ownership should be the basis on which we shape public policy regarding the proprietary schools (as well as every other component of the postsecondary education industry).

Comments by Commissioner Marian W. LaFollette

The National Commission on the Financing of Postsecondary Education has identified several national objectives. In terms of equality of access, freedom of choice, and opportunity for assistance once enrolled, institutions of postsecondary education, particularly community colleges, will need additional assistance and encouragement.

Furthermore, the National Commission realizes that major improvements in the equality of access to postsecondary education must focus upon: (1) high school students prior to graduation; (2) students in financial need; and (3) counseling and guidance services for students once enrolled.

I am convinced that postsecondary institutions should make special arrangements to work with the early high school grades concerning access to postsecondary education, and particularly to community colleges, and that the Congress should provide direct institutional aid to those institutions that make special efforts to achieve the national objective of access to postsecondary education.

Statement by Commissioner Tim Engen

The National Commission on the Financing of Postsecondary Education has developed an analytical framework for a set of proposed national objectives for the future of American postsecondary education. While the Commission has unanimously endorsed these efforts as criteria for future funders, it should be noted that the impact and ultimate acceptance of these depend upon a firm comprehension and a clear interpretation of the Commission's efforts by the American public, particularly taxpayers, students, administrators, and faculty, as well as legislators. As indicated by prior national decision making in education, there is both a lag between governmental action and Congressional response, and an insufficient amount of communication with the American public. Therefore, all efforts should be made to encourage participation by those who have been categorically denied input.

It is unfortunate that the Commission did not have the time, the resources, and, in some cases, the wisdom to correspond with the vast numbers of educational consumers and funders. It would then have been possible for the national objectives to have become less of an idealized criteria for future achievement, and more of a specific outline for policy recommendations. Similarly, it is unfortunate that the Commission did not grasp all issues generated by the acceptance of these objectives and with the use of the sophisticated analytical framework, propose an alternative funding model for American postsecondary education. The tools for such a decision were available; the willingness of the Commission to reach specific policy recommendations was not. In light of these indictments of the Commission's effort, the final summary observations of the review of student response (a research project conducted by the Commission which included communications with 3,000 students in American postsecondary education) are included here as both an example of the benefits of communication with participants, as well as a valid instrument to gauge student response. Policy issues are resolved here, not ignored; policy recommendations are resolved and not just listed.

SUMMARY OBSERVATIONS

It is hoped that the significance of the National Commission on the Financing of Postsecondary Education is not confined to this document alone. The serious discussions that this document may produce among all participants in American postsecondary education is of far greater importance.

Student Attitudes

1. Student attitudes are not a condition of society; they are an eminently powerful force that will impact all of postsecondary education.
2. Even without greater student participation, the student demand function will serve as an effective accountability mechanism in the future.
3. The idealism of equal opportunity objectives does not apply to student participation in institutional governance.

Educational Purposes

1. The National Commission has not considered nor altered the purposes of American postsecondary education.
2. The call for greater opportunities and greater options does not respond to the students' call for greater opportunities for self-development and employability.

3. The call for employability is broadly based; it is not isolated in any particular sector of postsecondary education.
4. The Renaissance man and those demanding gainful employment have the same need: to express one's self-development.
5. While formal instruction and institutionalization do not prohibit self-development, they do inhibit it.
6. The call for employability will remain as long as the expectations of postsecondary education participation and completion are not met.
7. To respond to the call for employability, a new orientation throughout all of American education is required.
8. If the "learning force" is not accepted in its totality, the call for greater opportunities for self-development will go unheeded.

National Objectives

A. Access

1. The objectives, as delineated by the National Commission, are great American goals acceptable to the students of American postsecondary education.
2. Access without opportunity is not "opportunity."
3. If universal access is to be achieved, funding programs must consider the financial needs of those participants outside of traditionally targeted populations.
4. Universal access is a worthy goal, but to the extent that the accomplishment of this objective diverts from other areas of required reform, it may be counterproductive.

B. Opportunity

5. The need for programs of opportunity is an indictment of elementary and secondary education. While opportunity programs are needed, postsecondary education should not categorically accept the burden of performance that has been neglected at other levels.
6. The opportunity to participate should not unduly emphasize completion. Such an emphasis is a function of unfair and unwise credentialism.

C. Choice

7. A choice of program offerings that is responsive to student needs, desires, and capabilities supercedes the importance of institutional choice.
8. Institutional choice is an inappropriate and extralegal discussion. Such choice is a luxury until access and opportunity have been accomplished.

D. Institutional Independence

9. If greater opportunities and greater options can be offered, some loss of institutional independence is justified.

E. Excellence

10. While research and public service should not be deemphasized, instructional quality, in the context of access and opportunity, is required and should be reemphasized.
11. The "era of equalitarianism" is a quantitative achievement unless instructional quality is funded as the qualitative complement.
12. Funds for the improvement of instruction in postsecondary education must accompany the funding schemes aimed at access and opportunity.

F. Student Responsibility

13. Students are responsible in their use of public funds and in achieving progress toward individualized academic goals.
14. A great majority of students are willing to share the responsibility for the funding of postsecondary education.
15. There are extenuating circumstances when the call for student responsibility is unrealistic. Defaulting loans may be less a symptom of student responsibility than a result of unfair repayment schedules and need analysis formulas.
16. The call for student responsibility warrants a call for responsibility from all other constituents and funders of postsecondary education.

G. Institutional Accountability

17. The students, as major funders of postsecondary education, have few, if any, effective accountability mechanisms and have little to say about the allocation of institutional resources.
18. Students must be considered in the determination and use of accountability procedures.
19. A greater sophistication of student participation is in the offing. The decisions of faculties, administrators, legislators, and taxpayers will be viewed with greater scrutiny than in past years.

H. Diversity-Flexibility

20. "Diversity and flexibility" is the salient student concern.
21. The existent "diversity and flexibility" of programs is not sufficient in number or in structure. Renewal and reform are required to respond to student needs.

22. "Diversity-flexibility" is a "pivotal" objective. Without its accomplishment, student needs go unattended, access is a quantitative achievement, and instructional quality has no home.

Status Quo Programs

1. If opportunity costs are not seriously considered and eventually incorporated into financial assistance programs, rising costs will price a considerable number of potential postsecondary education participants out of the marketplace.
2. The present need analysis formulas are unrealistic and do not reflect, in many cases, the ability to pay.
3. Middle-income families caught outside the eligibility requirements of financial assistance but within severe economic constraints must be considered as qualified recipients for financial assistance along with low-income and minority groups.
4. Even "full funding" of present programs will not achieve desired outcomes unless there is more adequate dissemination of information and less bureaucracy in their administration.
5. The adoption of a modified voucher plan (BEOG) was a dramatic step towards: 1) student choice and 2) accepting student responsibility.

Alternative Funding Proposals

1. Voucher Plan Grants

A unified grant program directed neither toward nor away from present target populations, but to include a significant portion of the project "exclusion" group, is essential. Such

a grant program, based primarily on realistic need, must provide for a substantial part of the total costs of PSE.

2. Income - Contingent Loans

Loans should be made available to expand the horizons of choice and better meet individual needs. Such a loan program should have primary emphasis on a flexible repayment schedule in terms of both time and amount. Loans should be structured to avoid overburdening students upon completion.

3. State Scholarship Programs

Incentives should be provided to encourage state governments to formulate and adequately fund scholarships. An extensive scholarship program would not only enhance choice but also allow access on the basis of academic ability.

4. Realistic Need Analysis

Need analysis should accurately reflect, as the name implies, need. Students feel that present need accounting does not, in fact, accurately indicate the ability to pay. The expected large parental contribution of the middle-income families is not realistic. Calculating the average rate of return of capital investments and adding it to net taxable income is not realistic. Assuming a standard student contribution is not realistic.

5. Expansion of Improvement Programs

The overwhelming student support for improvement of PSE and the Commission objectives, the realization that improvements must accompany expansion, and the institutional struggle for survival in light of declining enrollments all clearly illustrate the need for diversity, flexibility, and innovation.

Institutions of PSE must be allowed the chance (and perhaps be goaded into it) to develop new classes, curriculums, and programs. The present Fund for the Improvement of PSE, funded at \$10 million in FY 73, is not enough to insure or even facilitate the need for improvement.

6. Institutional Block Grants for Opportunity

As expanded grant programs may provide additional access, so must funding schemes be developed to supplement the new access with opportunity. Expensive, but important, opportunity programs will answer the question, "What do I do after I'm accepted?"

7. Institutional Block Grants for Instructional Quality

The concept of PSE as endorsed by the Commission is providing an educational experience to those who participate—the emphasis is on learning. This concept, as defined by students, requires instructional quality. To ease the competition for research monies, institutional grants for instructional quality are a necessity, not a luxury.

Comments by Commissioner Ruth C. Silva

I voted for the Commission's REPORT with various revisions that the Commission instructed its staff to make, but the deadline for filing "individual views" forced me to write my views without having had an opportunity to read the REPORT's final version with all of these revisions incorporated into it.

I strongly endorse Chancellor Ernest Boyer's "guiding principles", which may help to dispel some of the confusion surrounding postsecondary education's financing. I do not concur, however, in Chancellor Boyer's endorsement of the Commission's analytical model and wish to underscore some of the model's limitations.

The eighth element in the "analytical framework" is estimated interrelations between changes in financing and the responses of students. The estimated interrelations apparently do not involve any interrelations between changes in financing and the responses of institutions, donors, governmental bodies, and so forth. Consequently, the model is quite removed from the real world. Changed tuitions obviously affect students' decisions about enrolling, but changed tax policies also affect donors' decisions about contributions to postsecondary institutions, competing demands for public service likewise change legislative decisions about appropriations for postsecondary institutions, and so forth. Moreover, I do not know all of the assumptions involved in estimating even the student responses.

On December fifteenth, the Research Director told the Commission that the "coefficients" used in the "analytical steps" (Chapter 7) were derived from "a regression-type analysis" made by other researchers who will be cited in the footnotes. I have been unable, however, to secure the footnotes for Chapters 6 & 7. Consequently, I am unable to evaluate the research design. On December fifteenth,

the Research Director told the Commission that neither partial nor multiple regression was used for estimating student-enrollment responses to changes in financing postsecondary education. As a matter of fact, it seems that no regression analysis was used at any time and that mere arithmetic calculations were used instead. This suggests that "partial derivatives" may have been used. If so, this will raise a series of questions in the minds of statisticians and economists.

Economists may also raise questions about postsecondary education's cost-inflation rate of 5.8 percent, the compound rate of increase in institutional expenditures based on the recent past. First, the inflation rate for postsecondary institutions' expenditures has been higher than the inflation rate for the national economy as a whole. When postsecondary institutions' budgets are tighter, however, this relatively higher rate of inflation may not continue. Second, economists have recently projected much higher rates of inflation for the general economy than the 5.8 percent used in the Commission's calculations. Third, the "analytical framework" or "model" seems to ignore changes in personal disposable income. As people's real incomes rise or fall, expenditure patterns (consumer preferences) for goods and services (including expenditures for postsecondary education) also change. It is unlikely that personal disposal income will remain unchanged until 1980, but the enrollment projections for 1980 (Chapter 7) seem to be based on the assumption that personal disposable income will remain constant. Economists will doubtless raise these three and many other questions as well.

I also wish to underscore that the "analytical framework" and the "analytical steps" do not help the reader reach any conclusions about how alternative financing plans would promote or retard the Commission's objectives of diversity, excellence, accountability, or responsibility. The research design evaluates alternative plans only in terms of "access" and "choice" and, perhaps, "opportunity." In

sum, the research design is oriented toward student interest and student responses. It does not lend itself to evaluating plans in terms of institutional or national goals such as excellence in basic research and graduate instruction. Consequently, any evaluations made on the basis of these other criteria are purely judgmental and do not (and cannot) flow from the analysis. Therefore, the Commission instructed the staff to delete all statements about how a given plan might promote or retard excellence, institutional diversity, and the like. Finally, the analytical model does not simulate institutional, governmental, or donor responses.

The six plans analyzed in Chapter 7 were used merely to test the research design's operation. I must emphasize that the Commission did not endorse any one of these plans as superior to the other five or to other plans that were not analyzed. Analyzing these plans was merely an academic exercise to test the model, and the reader should imply nothing from their selection for analysis.

I also want to emphasize that the Commission did not endorse certain procedures relating to interim national standards for deriving per-student costs. By adopting Chapter 8, the Commission does recommend the cost-finding principles, procedures, and techniques set forth in a separate staff report. Although these include some of the procedures developed by the National Center for Higher Education Management Systems (NCHEMS), the Commission did NOT endorse the entire NCHEMS system. The recommended interim procedures are eclectic and have been drawn from the "audit guidelines" of the American Institute of Certified Public Accountants, from the "joint accounting group recommendations" made by the National Association of College & University Business Officers, and from other sources as well. Nothing in the Commission's REPORT or in the Staff Report on Interim Standards should be interpreted to endorse any NCHEMS procedures except those specifically spelled out in the staff report approved by the Commission's committee on December fourteenth.

Most particularly, on December seventh, the Commission rejected the NCHEMS "faculty effort" or "faculty activity" reports as a recommended basis for allocating a faculty member's salary among the various functions that a faculty member performs—e.g., instruction, research, academic advising, and the like. When this NCHEMS procedure was subsequently inserted as a recommendation in the staff report on interim standard procedures, the Commission's committee on this subject instructed the staff to remove this proposed recommendation from the staff report and to insert a paragraph explaining the weaknesses of the NCHEMS "faculty effort" reports as a basis of allocating faculty salaries among various faculty functions. The Commission and its committee voted to recommend that these allocations be made on the basis of the functions assigned to each faculty member—i.e., faculty assignment rather than faculty activity reports.

The NCHEMS system, on the other hand, allocates a faculty member's salary among various functions on the basis of that faculty member's reported effort. If he reports that he devotes a quarter of his effort to "research", for example, a quarter of his salary is allocated to research. The faculty-effort-report form is simplistic and does not reflect the complexities of faculty activity. The form asks a faculty member to allocate his efforts that produce joint products or, in some cases, produce nothing at all. Moreover, these forms apparently do not provide for the faculty member's most time-consuming activity—i.e., reading to keep abreast in his academic field. This is not teaching, it is not research, but it is necessary for good teaching and for any research at all. Consequently, virtually all professors who are saddled with the chore of filling percentages in the blanks on a faculty-effort-report form either fill in random numbers totaling 100 or have a departmental secretary do so. Consequently, the resulting data are artifacts of a questionnaire that appears to have been constructed by persons who are unencumbered by the experience of teaching, doing

research, and keeping abreast in an academic field.

The interim standard procedures recommended require that the cost per-student-per-credit-hour be determined, but these will not be reported. Moreover, in determining non-direct instructional costs, the components of administrative costs will not be reported separately for various levels of administration. These components of the per-student cost are folded together into a resulting number so that funders cannot determine whether educational resources are used efficiently or not. These numbers will not tell the donor, taxpayer, or policy-maker whether certain departmental administrations are featherbedded, whether a college administration is featherbedded, or whether a university's central administration is featherbedded although the separate reporting of direct instructional costs apparently will indicate whether the faculty is featherbedded and whether debt service and certain other indirect costs are inordinately high. The reader may be interested to know that it seems not unusual for direct instruction to account for only one-third of a course's cost of production. I submit that these facts should be borne in mind by those people who will be responsible for developing cost-finding principles, procedures, and techniques for postsecondary education in the future.

Comments by Commissioner George Kaludis and Commissioner Dan Martin

Three points of emphasis seem warranted as a guide for future policy considerations:

1. The Commission's analysis of alternative financing patterns should not be considered an endorsement for abandoning a policy of moderate tuition charges for public institutions.
2. Public policy, in the short run, should look to the use of present institutional resources, both human and physical, until such time as new missions for postsecondary educational institutions emerge (for example, lifelong learning and non-traditional studies).
3. The Commission's finding that financial distress may in the future jeopardize the achievement of national objectives is not just a long range projection. The danger is clear and present, and, although it is an industry-wide problem, its impact is and will be sharply uneven, as total enrollments stop growing and begin to decline. Without changes in public policy, private collegiate institutions must necessarily look to increased tuition charges as the means to meet escalating costs. Public policy at the state and federal levels should include a continuing review of financial health of all sections of postsecondary education.

Comments by Commissioner Winfield Dunn

Because of other commitments, I have been unable to involve myself as actively as I had hoped in all of the deliberations of this Commission during the past year. Nevertheless, from my perspective, the most important period in the history of the Commission is still ahead. The impact of the final Commission report will be dependent upon its dissemination, particularly to policy makers who must make decisions effecting postsecondary education.

The strength of this report is its development and description of a process and an analytical framework which will enable policy makers to determine the probable consequences of possible alternatives for financing all of postsecondary education, and the interrelationship of those consequences. This assessment of interrelationships is extremely important to those of us at the state level who have responsibilities for coordinating the varied and complex financing programs for postsecondary education.

I know each commissioner and our excellent staff will relay these findings back to those within their spheres of influence. As an elected state official [Governor of Tennessee], I want to offer to do my part to share the Commission's report with state officials throughout the nation. Regarding the work of this Commission, I have relied on the Education Commission of the States for advice and assistance. The Education Commission of the States has strong channels of communications with education decision makers in every state. I expect to seek their assistance in disseminating the findings and recommendations of our report, and I encourage the full Commission to do likewise.

APPENDIX A

ADDITIONAL TABLES
FOR CHAPTER 3

Table A-1: Percentage Distribution of Income for Public Two-Year Colleges,
by State, 1971-72

States With A Two-Year College System	Control & Support Shared With Local	Percentage Contribution by Source				
		Local	State	Federal	Fees	Other
Alaska	No	0%	75%	0%	25%	0%
Arizona	Yes	50	37	3	1	9
Arkansas	Yes	15	47	13	22	3
California	Yes	60	34	6	0	0
Colorado (a)	No	36	39	2	15	8
Connecticut	No	0	68	6	26 (g)	0
Delaware	No	0	100	0	0	0
Florida	Yes	0	70	6	21	3
Georgia (c)	No	0	71	0	26	3
Hawaii	No	0	75	23	2	0
Idaho	Yes	32	40	2	24	1
Illinois	Yes	43	36	2	17	2
Indiana	Yes	2	13	10	31	44
Iowa	Yes	14	51	8	24	3
Kansas	Yes	62	21	1	13	3
Kentucky	No	0	70	6	12	12
Louisiana	Yes	19	76	0	5	0
Maryland	Yes	28	39	6	22	5
Massachusetts (d)	No	0	74	1	25	0
Michigan	Yes	26	40	3	26	5
Minnesota	No	0	71	2	27	0
Mississippi	Yes	21	50	13	14	2
Missouri	Yes	34	28	8	24	6
Montana	Yes	26	45	6	16	7

Table A-1 (Continued)

Nebraska	Yes	35	26	0	53	6
Nevada	No	0	4	0	34	62
New Jersey	Yes	30	41	1	27	1
New Mexico	Yes	51	40	5	2	0
New York	Yes	39	36	2	20	3
North Carolina	Yes	10	78	5 (b)	7	0
North Dakota (e)	Yes	10	54	1	31	3
Ohio	Yes	34	40	1	23	2
Oklahoma (f)	Yes	3	60	0	30	7
Oregon	Yes	27	49	3	21	0
Pennsylvania	Yes	32	32	2	32	2
Rhode Island	No	0	70	1	23	7
South Carolina	No	10	69	10	11	0
Tennessee	No	0	75	7	14	4
Texas	No	20	56	4	17	3
Utah	No	0	66	8	22	4
Virginia	No	0	71	11	17	1
Washington	No	0	79	6	11	4
West Virginia	No	0	64	0	26	10
Wisconsin (g)	Yes	65	19	10	7	0
Wyoming	Yes	39	43	2	12	4

Source: U.S. Bureau of the Census, unpublished data collected by Dr. Walter Garms from financial and budget reports (state and local sources).

^aDoes not include six state operated schools.

^bStudent fees and tuition go into the state general fund from which total operating expenses are funded.

^cExcludes one locally-controlled school.

^eFor locally controlled colleges.

^fIncludes all junior colleges.

^gFor area vocational-technical schools.

Appendix A-2: Operating Revenues of Noncollegiate Institutions, by Type of Institution
and by Major Sources of Revenues, 1971-72
(In Thousands)

Institutional Types	Student Charges	Government Aid	Private Gifts	Endowment Income	Auxiliary Enterprises	Other Sources
Public						
Technical and Trade Schools	\$ 37,892	\$189,552	\$ 9,464	\$ 88	\$ 39,756	\$ 7,749
Other Schools	25,680	396,047	15,165	293	34,048	78,073
Proprietary						
Technical and Trade Schools	158,293	187,202	--	2,088	14,731	68,070
Other Schools	837,098	139,117	55,848	--	287,798	511,281
Nonprofit						
Technical and Trade Schools	24,236	34,204	5,134	939	8,737	17,703
Other Schools	45,997	35,359	39,345	7,717	33,529	60,054
Correspondence Schools	741,199	3,726	0	0	22,750	--
	\$1,870,395	\$985,207	\$124,956	\$11,125	\$441,349	\$742,930

Source: NCFPE Study of Noncollegiate Institutions, preliminary data.

Note: Sampling was based on three major institutional categories: (1) Trade and Technical; (2) Others; and (3) Correspondence Schools.

Trade and Technical institutions include, for example, auto-mechanics, baking, barbering, bartending, carpetlaying, drafting, and other technical programs. Others include vocational programs, business schools, cosmetology programs, flight training, hospital and para-medical programs, and commercial training programs.

The three institutional controls are as follows: (1) Public (institutions controlled by federal, state or local governments); (2) Proprietary (institutions operated as private, profit-making schools); and (3) Nonprofit (institutions operated as independent nonprofit-making schools).

APPENDIX B

ADDITIONAL TABLES
FOR CHAPTER 4

Table B-1: Income Distribution of Students by Carnegie Classification Sector, and Level, 1972-73

	Public Undergrad.	Research Univ.	Govt. Grant	Comp.	Lib. Arts*	Two Yr.
Under 3,000	1.5A	4.7A	4.5A	10.0A	4.5A	
3,000 - 5,999	11.1	15.0	13.4	5.0	13.2	
6,000 - 9,999	4.4	3.6	8.0	5.0	8.6	
10,000 - 14,999	10.6	16.5	10.6	5.0	13.6	
15,000 - 24,999	25.5	28.4	27.4	50.0	33.3	
25,000 and over	27.2	28.1	22.0	20.0	20.0	
	100.0A	100.0A	100.0A	100.0A	100.0A	
Total Enrollment	1,102,558	429,440	1,756,163	48,918	1,616,940	
Private Undergrad.						
Under 3,000	1.5A	10.6A	3.4A	3.2A	5.6A	
3,000 - 5,999	5.6	5.8	9.0	11.3	4.2	
6,000 - 9,999	4.3	6.7	4.7	5.9	9.7	
10,000 - 14,999	15.4	15.4	11.4	8.0	13.4	
15,000 - 24,999	25.0	39.6	27.7	27.1	31.9	
25,000 and over	20.4	24.0	30.9	25.4	19.4	
	100.0A	100.0A	100.0A	100.0A	100.0A	
Total Enrollment	192,580	162,300	395,281	540,292	105,631	
Public Graduate						
Under 3,000	0.5A	4	2.8A	A	A	
3,000 - 5,999	9.2	1.0	5.0	-	5.5	
6,000 - 9,999	14.5	15.6	11.3	-	19.2	
10,000 - 14,999	31.1	32.3	36.5	-	27.4	
15,000 - 24,999	30.6	32.3	29.4	-	35.6	
25,000 and over	18.5	18.9	18.9	-	18.5	
	100.0A	100.0A	100.0A	100.0A	100.0A ³	
Total Enrollment	341,312	115,610	47,012	968	305	
Private Graduate						
Under 3,000	3.2A	4.5A	A	A	A	
3,000 - 5,999	7.2	9.1	9.4	6.5	-	
6,000 - 9,999	3.2	2.3	7.1	10.0	-	
10,000 - 14,999	32.6	11.4	15.3	32.4	-	
15,000 - 24,999	28.0	31.8	16.5	34.8	-	
25,000 and over	16.8	25.0	12.9	15.2	-	
	100.0A	100.0A	100.0A	100.0A	- ²	
Total Enrollment	158,526	67,015	4,977	2,674	-	

Non-Collegiate Sector	
Under 3,000	5.6
3,000 - 5,999	15.0
6,000 - 7,499	15.8
7,500 - 9,999	15.8
10,000 - 14,999	18.7
15,000 - 24,999	18.7
25,000 and over	5.2
	100.0A
Total Enrollment	1,022,900 (Est.)

Non-Collegiate Sector
 Under 3,000 5.6
 3,000 - 7,499 15.0
 7,500 - 9,999 9.4
 10,000 - 14,999 13.4
 15,000 - 24,999 35.3
 25,000 and over 18.7
 100.0A

Total Enrollment
 1,623,000 (Est.)

*Note small sample size.

¹Based on population samples derived by the Bureau of the Census, October 1972.

²Sample too small to be meaningful.

³Graduate students are reported at two-year branch campus institutions.

Table B-2: Highest Educational Attainments, by Selected Social Factors, Sex and Sub-sample (presented in percentages)*

	MEN					WOMEN				
	High School Dropout	High School Graduate	Less Than 2 Yrs College	2-4 Yrs. College	TOTAL	High School Dropout	High School Graduate	Less than 2 Yrs College	2-4 Yrs. College	
<u>Income</u>										
Less than \$6,000	14%	43%	19%	24%	100%	13%	54%	13%	20%	
\$6,000 - \$8,999	11	34	18	37	100	06	44	15	36	
\$9,000 - \$11,999	13	28	22	38	100	11	34	18	37	
\$12,000 and above	08	23	13	55	100	07	28	20	45	
<u>Father's Occupation</u>										
Professional & Technical managers & proprietors	06%	16%	16%	61%	100%	07%	18%	14%	61%	
sales & clerical	07	31	19	43	100	07	39	17	37	
skilled & semi-skilled	08	19	25	48	100	04	44	17	35	
labor & service worker	10	41	22	27	100	11	55	12	21	
	14	51	17	18	100	16	59	12	13	
<u>Father's Education</u>										
Less than high school graduate	16%	49%	18%	18%	100%	19%	58%	10%	14%	
high school graduate	10	36	22	32	100	10	49	16	26	
some college	13	18	22	48	100	10	39	16	36	
college graduate	06	19	11	65	100	02	19	17	62	
graduate or professional degree	02	21	19	59	100	09	26	12	54	
<u>Ethnicity</u>										
Black/Negro	27%	49%	09%	16%	100%	21%	49%	11%	19%	
Oriental	01	42	17	41	100	00	37	29	34	
White/Caucasian	10	37	20	33	100	13	48	14	26	
American Indian	20	35	07	10	100	24	71	01	04	
<u>High School Curriculum</u>										
General	11%	49%	22%	19%	100%	12%	54%	11%	23%	
college preparatory	01	12	18	69	100	01	18	17	65	
commercial/business	09	49	29	13	100	06	74	15	06	
vocational	09	66	22	04	100	07	82	07	05	
agricultural	02	49	19	17	100	50	50	--	--	
other	07	47	25	22	100	04	63	14	19	
<u>Ability (Specific Project Talent Tests)</u>										
Lowest Group	29%	55%	10%	06%	100%	32%	56%	06%	06%	
group 2	19	54	19	10	100	18	63	11	08	
group 3	06	45	24	25	100	10	60	15	15	
group 4	04	27	25	45	100	04	44	20	32	
highest group	01	13	17	70	100	02	22	14	63	

Source: Project TALENT, special tabulation.

*An example of how this table is read is as follows: Of the men whose families earned less than \$6,000, 14% dropped out of high school, 43% stopped their education when they completed high school, 19% stopped their education with less than 2 years of college, and 24% stopped their education after completing 2 to 4 years of college.

Table B-3: Percentage Dropout, Class of 1966 Family Incomes and by Institutional Type and Controls*

Type and Control	All Income Levels	Less Than \$4,000	\$4,000 to \$5,999	\$6,000 to \$7,999	\$8,000 to \$9,999	\$10,000 to \$14,999	\$15,000 to \$19,999	\$20,000 to \$24,999	\$25,000 to \$29,999	\$30,000 and over	No Idea
All institutions	23.9	23.9	25.7	24.2	24.8	24.0	22.0	18.9	18.6	20.4	24.7
Public Institutions	26.4										
Universities	25.4	20.8	30.8	25.9	28.5	25.2	23.2	16.6	22.9	20.1	26.7
Four-Year	23.3	24.2	23.4	23.7	22.4	22.9	24.0	20.4	21.7	14.6	25.1
Two-Year	30.3	26.2	30.0	27.2	28.9	30.9	27.6	36.0	33.7	49.8	33.6
Private Institutions	18.3										
Universities	14.8	21.2	20.0	13.9	15.2	15.8	13.7	13.4	10.8	14.7	13.9
Four-Year	17.5	23.1	19.3	15.6	19.5	16.5	15.5	14.7	13.8	13.7	17.0
Two-Year	23.6	24.5	21.0	22.8	24.8	27.9	27.1	16.9	13.0	37.6	20.6

Source: V. Tinto and J. Cullen, *Dropout in Higher Education*, mimeographed (1973), preliminary Table.

*Dropout is defined as a student who is out of school, permanently or temporarily, without having obtained an associate or bachelor's degree.

Table B-4: Results of Regressing Percentage Dropout
on Family Income, by Institutional Type and Control

Type and Control	Intercept	Coefficient on Income* (Per \$1000)	R ²
All Institutions	25.26442	-0.17 (-3.4000)	0.66146
Public Institutions			
Universities	26.90565	-0.20 (-1.81818)	0.30665
Four-Year	25.27830	-0.21 (-4.2000)	0.75078
Two-Year	23.88617	0.53 (5.3000)	0.78932
Private Institutions			
Universities	18.07968	-0.17 (-2.1250)	0.39847
Four-Year	20.09648	-0.20 (-3.3333)	0.63469
Two-Year	21.64928	0.15 (0.71428)	0.06505

*t - statistics shown under coefficients.

Table B-5: Youth in Transition Educational Attainment Percentages,
by Selected Social Factors

Student Characteristics	High School Dropouts (YIT)	High School Graduates (YIT)	College Enrollees (YIT)
Income			
Less than 4,000	16	58	26
4,000 - 6,999	13	47	41
7,000 - 9,999	12	42	46
10,000 and above	08	38	54
Father's Occupation			
Professional & technical	07	27	66
Farmer (low scale), manager, proprietor	08	41	51
Clerical and sales	09	37	54
Skilled & semi-skilled	13	51	29
Labor & service worker	19	58	23
Father's Education			
Less than H.S. graduate	18	64	19
High School training	10	50	40
Some College	05	30	64
College graduate	05	24	71
Graduate work	05	22	72
Ethnicity			
White/Caucasian	10	47	43
Black/Negro	25	54	22
Other	21	37	42
High School Curriculum			
General	19	61	20
College Preparatory	04	23	73
Commercial/Business	09	65	26
Vocational	11	74	15
Agricultural	18	54	29
Other: military, arts, etc.	27	62	11

Ability (Tests used are too specific
to original YIT aims to be useful
here.)

Table B-6: Columbia Census Educational Attainment Percentages,
by Selected Social Factors

Student Characteristics	Ever Enrolled In College	Never Enrolled In College	Ever Enrolled In College	Never Enrolled In College
	M	M	F	F
Income				
Less than 4,000	44	56	24	76
4,000 - 5,999	47	53	37	63
6,000 - 10,000	66	34	50	50
10,000 and above	79	21	68	32
Father's Occupation				
White Collar	78	22	67	33
Blue Collar	54	46	37	63
Father's Education	Sample Not Separated By Sex			
Less than 8th Grade	32	68		
9-12	54	46		
College	80	20		
Ethnicity				
White/Caucasian	64	36		
Black/Negro	40	60		
Other	100	--		
High School Curriculum				
General	35	66		
College Preparatory	86	14		
Commercial/Business	38	63		
Vocational	35	65		
Agricultural	33	67		
Other	53	47		
No Information	60	40		
Ability, in Stanine (9 is high)				
1-3	17	83		
4	23	77		
5	41	59		
6	42	58		
7	68	32		
8-9	75	25		
No Information	47	53		

Preface to Tables B-7 Through B-10

An analytic, descriptive device employed in the following four tables to present information is a triangular chart. Along each of the three equally-sized sides, the proportion of the population in one of the three income classes is measured. Any point on the chart shows the percentage of population in upper-, middle- and lower-income groups. The central point of the graph represents a distribution in which the proportions of the three income groups are equal. Any point located in the northern segment of the triangle represents a population distribution in which the upper-income class dominates. Similarly, a location in the southeastern segment represents the dominance of the middle-income group, and the southwest segment, of the lower-income group.

To what extent is the objective of access being met today? This question could be answered by examining the composition of the student body in terms of the proportions of different income classes. A comparison may be made between the point that represents the family income distribution of persons 18 - 24 years old, on the one hand, and a similar distribution of those enrolled. The distance between the two points might be interpreted as a measure of an access gap.

Table B-7: Proportion of Population by Three Income Classes
Population 18 - 24 and Enrollment

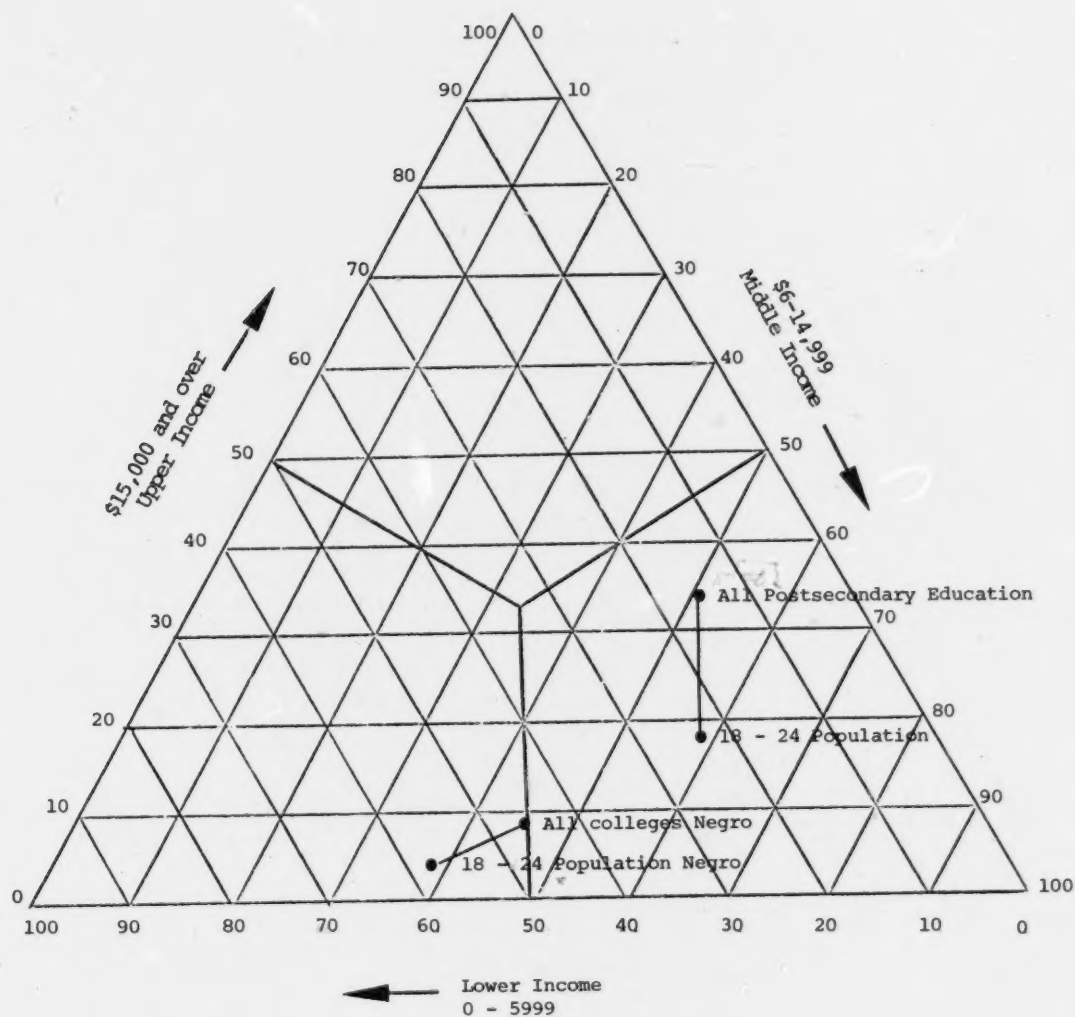


Table B-8: Proportion of Population by Three Income Classes Enrollment

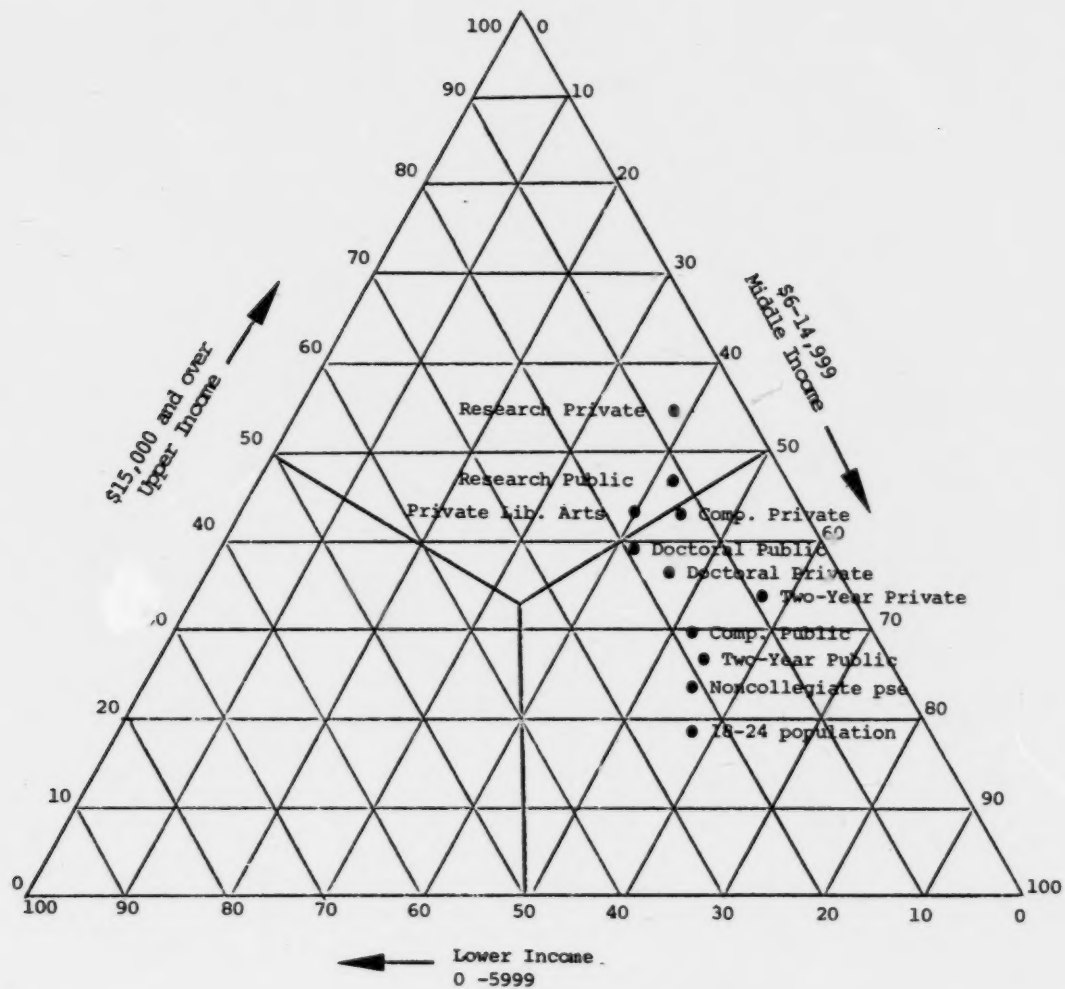


Table B-9: Proportion of Population by Three Income Classes
Federal Student Aid Recipients

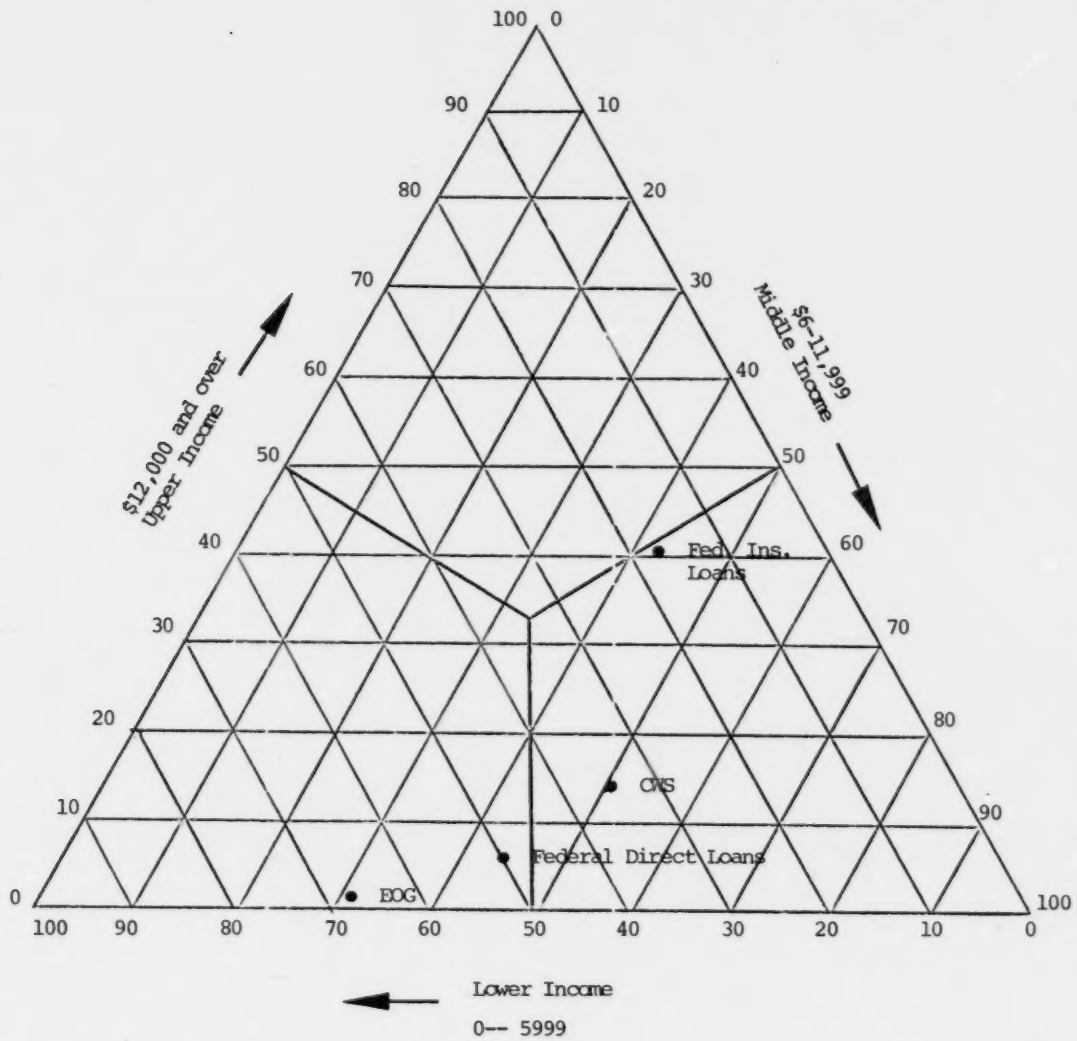
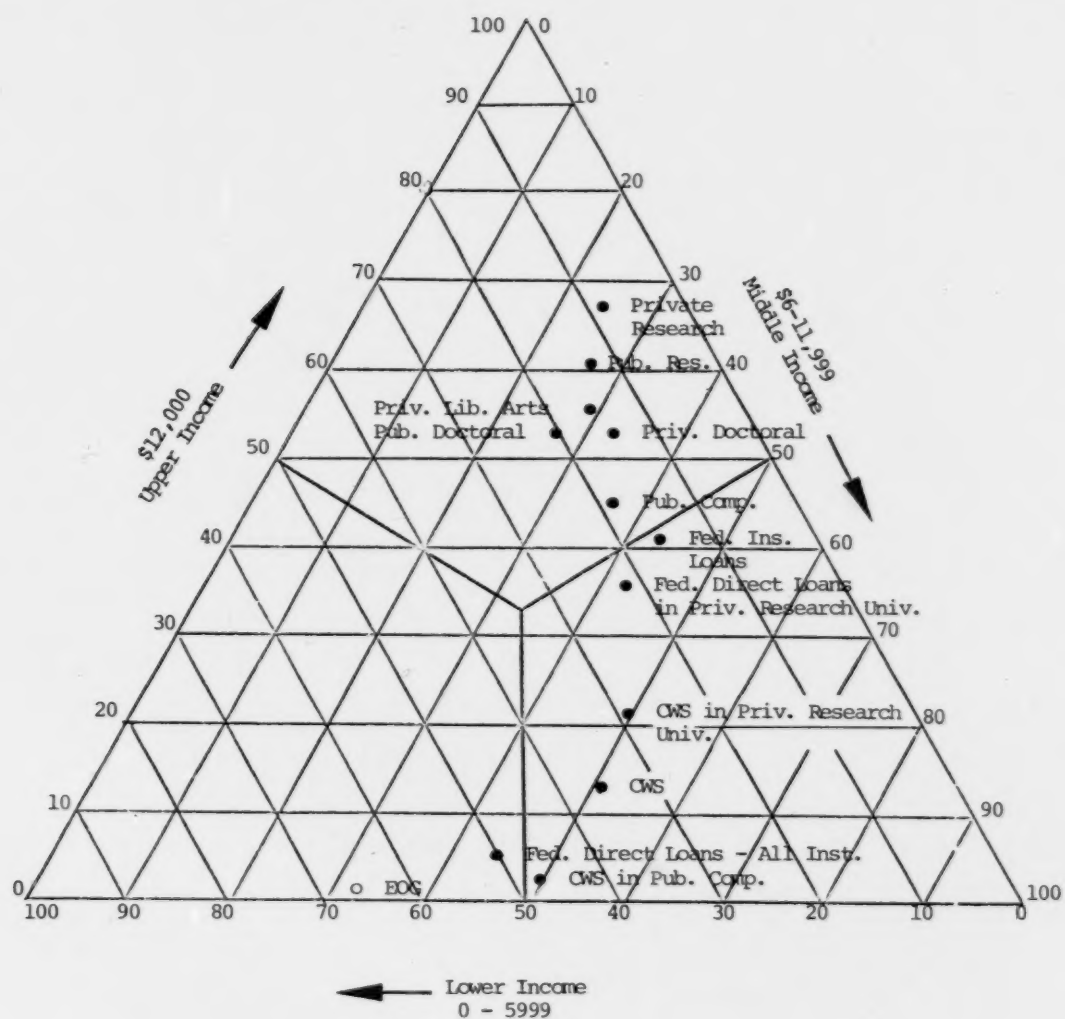


Table B-10: Proportion of Population by Three Income Classes

Enrollment and Federal Student Aid Recipients



APPENDIX C

ADDITIONAL TABLES
FOR CHAPTER 5

Appendix

Table C-1: Summary of Selected Conclusions in Recent Studies
of Financial Distress in Higher Education (1968-73)

The Economics of the Major Private Universities (Berkeley: Carnegie
Commission, 1968).

Author: W.G. Bowen
Institutions in sample: 3
Type of institutions: Major Universities
Is there a crisis?: Yes

Conclusions: Bowen, who states that the crisis is potentially general, cites cost-income scissors effect as a major inherent and long-range cause of future deficits. He dwells on limits to productivity improvement in education.

The Finance of Higher Education (Berkeley: Carnegie Commission, 1968).

Author: H.R. Bowen
Institutions in sample: not applicable
Type of institutions:
Is there a crisis?: Yes

Conclusions: This time Bowen mentions the unhealthy escalation of tuition and student charges in private as compared to public institutions and pleads for student and institutional support to help defray the explosive growth of student aid expenditures.

The New Depression in Higher Education (New York: McGraw-Hill, 1971).

Author: E.F. Cheit
Institutions in sample: 41
Type of institutions: All types
Is there a crisis?: Yes

Conclusions: Almost three-fourths of the institutions studied were either headed for or in financial trouble. Weighted and projected nationally, some 42 percent of the institutions with more than half of the students were headed for financial trouble, and 19 percent with almost one quarter of the enrollments were found to be in financial trouble.

The New Depression in Higher Education - Two Years Later (Berkeley: Carnegie Commission, 1973).

Author: E.F. Cheit
Institutions in sample: 41
Type of institutions: All types
Is there a crisis?: Yes, but less so than before.

Table C-1 (cont.)

Conclusions: "Fragile stability" has been achieved: 37 percent of the schools were somewhat better off, 26 percent about the same, and 37 percent were worse off. Public research universities showed the greatest concern about their future, and state colleges appeared the most secure in this sector. Private institutions displayed the widest extremes; small church-related colleges seemed to be in the worst shape, and the highly selective institutions were the most secure.

The Red and the Black (Washington, D.C.: Association of American Colleges, 1971).

Author: W. Jellema
Institutions in sample: 500+
Type of institutions: Private colleges and universities
Is there a crisis?: Yes, very serious

Conclusions: Operating deficits are more numerous and larger; student aid deficits and debt service are cited as a major cause along with general inflation, inadequate planning, and wishful thinking.

From Red to Black? (San Francisco: Jossey-Bass Publishers, 1973).

Author: W. Jellema
Institutions in sample: 554
Type of institutions: Private colleges and universities
Is there a crisis?: Yes, getting worse

Conclusions: Mean deficits continue to increase. Between one-fifth and one-third of the institutions in the sample are threatened, and more than half are in significantly worse financial shape (comparison is between 1970 and 1971 data). Worsening enrollments are mentioned.

People's Colleges in Trouble: A Financial Profile of the Nation's State Universities and Land-Grant Colleges (National Association of Schools and Land Grant Colleges, Office of Research and Information, n.d.).

Authors: G. Hudgins, I. Phillips
Institutions in sample: 78
Type of institutions: State universities and land-grant colleges
Is there a crisis?: Yes, and getting worse

Conclusions: Increasingly, public institutions are reporting operating deficits: none in 1965, 9 in 1969, and 14 in 1970. Budget growth is inadequate. With 10 percent growth being called a stand-still budget, 44 of the reporting institutions had 10 percent or less budget growth and 3 had declining budgets. Those who by law cannot show deficits are said to have taken "extreme measures" as a first rather than as a last resort; economy measures are cited.

Table C-1 (cont.)

The Cost of College, Vol. I (Cambridge, Mass.: Columbia Research Associates, 1971).

Authors: Columbia Research Associates
 Institutions in sample: 50
 Type of institutions: Predoctoral; public and private
 Is there a crisis?: No general crisis

Conclusions: The authors find no general evidence of imbalance between income and expenditure trends. Distinguishing between colleges that are inefficient and those with "high costs," they suggest that "high cost" institutions may require permanent assistance in contrast to "utilitarian" schools.

The Cost of College, Vol. II (Cambridge, Mass.: Columbia Research Associates, 1972).

Authors: Columbia Research Associates
 Institutions in sample: 50
 Type of institutions: Predoctoral; public and private
 Is there a crisis?: Worsening condition for some

Conclusions: The authors expect private institutions to be supplanted increasingly by public colleges and universities and suggest among other things that improvement will come from better management and planning. Study of cost implications must precede managerial decisions, they state.

The Golden Years (Wooster, Ohio, 1972).

Authors: H.H. Jenny & G.R. Wynn
 Institutions in sample: 48
 Type of institutions: 4-year private liberal arts colleges
 Is there a crisis?: No general crisis, but worsening finances

Conclusions: This study describes, among other things, the increasing escalation of unit costs, the larger and more frequent operating deficits, and the widening subsidy gap resulting from student aid expenditures.

The Turning Point (Wooster, Ohio, 1972).

Authors: H.H. Jenny & G.R. Wynn
 Institutions in sample: 48
 Type of institutions: 4-year private liberal arts colleges
 Is there a crisis?: Worsening overall financial condition; no crisis

Conclusions: The number of deficits increased from 6 institutions in 1961 to 29 institutions in 1970. The average deficit in 1970 was \$149,000. Student aid deficits increased

Table C-1 (cont.)

from \$3.2 to \$12.5 million during the same period, or \$65 to \$187 per student. The future capital replacement requirements (for plant and equipment) increased from \$1 to \$13.2 million annually (50 years straight line depreciation in 1970 Dollars).

"The Adjustment of the Major National Universities to Budgetary Distress," unpublished (Washington, D.C.: American Council on Education, 1972)

Author: R.H. Atwell
Institutions in sample: 8
Type of institutions: Major research universities
Is there a crisis?: Yes, but the institutions are coping with it.

Conclusions: There have been major setbacks in research (but less than for all universities), graduate fellowships, training grants, medical school and library support, and mental health services. Private universities tend to show deficits before public institutions; the latter experience "academic deficits." Because of improved management, new budgeting and budget control procedures, and cost studies, institutions surveyed seem to be turning the corner. Public institutions feel less free to manage because of state legislature mandated line item budgeting, in some cases; private universities feel more confident of their ability to cope. Temporarily, income-expenditure trends seem to have been brought into balance.

"Liberal Arts College Printing: Has the Market Taken Over?" Liberal Education, Vol. LVIII: 3 (October, 1972).

Author: G.R. Wynn
Institutions in sample: 425
Type of institutions: 4-year liberal arts colleges
Is there a crisis?: Yes, both now and in the future

Conclusions: The gap between public and private tuition is increasing, and projected cost and price trends in the private sector are impossible to be sustained. Tuition and student charges produced through annual increases in student aid/tuition are in an increase spiral which is beginning to be self-defeating.

Institutions in sample: 23
Type of institutions: Black 4-year liberal arts colleges
Is there a crisis?: Yes, worse than for white colleges

Conclusions: Between 1964-65 and 1971-72, total student charges increased at an annual compound rate of 6.9 percent for white and 10.6 percent for black institutions.

Table C-1 (cont.)

"Varieties of Financial Crisis," in Universal Higher Education, ed., Logan Wilson and Olive Mills (Washington, D.C.: American Council on Education, 1972).

Author: F.E. Balderston
Institutions in sample: not applicable
Type of institution:
Is there a crisis?: Yes, there are several crises

Conclusions: The author mentions the following institutional crises: governance and control, lack of clear mission and philosophy, market conditions and position, and the lack of money. He dwells on cost push and on failure of income to keep pace with expenditures. He also finds strong evidence of W. Bowen's "scissors" effect over longer periods.

1972 Statewide Master Plan for Private Colleges and Universities of the State of New York (New York: Commission on Independent Colleges & Universities, 1972).

Author: Commission on Independent Colleges & Universities
Institutions in sample: 100
Type of institutions: Independent colleges and universities
Is there a crisis?: Yes; 53 are in financial difficulty

Conclusions: This report represents a compilation of individual long-range plans or projections. A prominent feature is the designation of 53 reporting institutions as "in financial difficulty," projecting an aggregate deficit of \$193 million. The same institutions also report unrestricted funds of \$360 million. The report speaks frequently of "academic depression," "financial crisis," and "intolerable consequences." It purports to provide evidence of "pricing out of the market." Its strongest evidence is the increasing student aid burden assumed by the sample institutions. Out of \$94.5 million in student aid grants, \$51.2 million was unfunded; the 53 institutions deemed in financial difficulty accounted for \$37.8 million of this.

Managing Finances in Community Colleges (San Francisco: Jossey-Bass Publishers, 1973)

Author: J. Lombardi
Institutions in sample: not applicable
Type of institutions: Community colleges
Is there a crisis?: Yes

Conclusions: The study takes financial distress in Community Colleges for granted. Distress is traced to changing priorities, fiscal weakness of states, taxpayer revolts, inflation, changes in public policy, and institutional management.

Table C-2: Percentage Changes in Expenditures Per FTE Student, by
Selected Carnegie Categories, 1970-72

Source	Leading Research Universities		Small Ph.D. Granting Inst's		Comprehensive Colleges-Ltd.		Other Liberal Arts Inst's		Two-year College	
	1970-1	1971-2	1970-1	1971-2	1970-1	1971-2	1970-1	1971-2	1970-1	1971-2
Instruction										
Public	5.6%	4.0%	11.1%	2.5%	8.8%	4.8%	-5.1%	-7.5%	8.4%	3.1%
Private	4.5	13.6	7.1	5.1	5.7	4.1	6.8	4.6	6.6	6.2
Libraries										
Public	5.9	-4.2	10.4	0.0	13.9	6.1	10.2	33.3	0.0	7.3
Private	5.4	13.7	9.9	4.5	9.6	2.2	6.0	2.8	7.9	5.9
Plant Maintenance										
Public	2.5	7.0	13.6	13.6	10.6	15.8	-8	-7.1	-2.7	11.0
Private	7.1	20.9	3.6	3.1	11.6	7.5	7.5	7.0	11.4	2.0
Other Education and General Expense										
Public	4.7	0.2	8.4	2.3	3.1	22.5	9.5	-3.4	-5.6	8.4
Private	8.9	22.0	17.2	4.6	0.4	8.1	9.5	9.6	15.7	5.5
Student Aid										
Public	9.2	6.4	21.2	16.7	6.4	15.0	8.7	42.5	30.3	16.3
Private	2.2	12.3	4.5	14.4	8.1	6.6	14.7	17.8	4.9	33.6

Table C-3: Percentage Changes in Income Per FTE Student, 1970-1
and 1971-2

Source	Leading Research Universities	Small Ph.D. Granting Inst's	Comprehensive Colleges- Limited	Other Lib- eral Arts Inst's	Two-year Colleges
	1970-1 1971-2	1970-1 1971-2	1970-1 1971-2	1970-1 1971-2	1970-1 1971-2
Tuition and Fees					
Public	7.8% 14.6%	21.3% 14.6%	29.3% 10.7%	11.5% N.A.	11.6% 7.7%
Private	6.7 18.1	11.7 8.0	10.0 7.7	11.1 8.8%	10.2 4.9
State Appropriations					
Public	.8 3.9	9.0 4.0	7.1 5.3	-1.1 -8.8	2.6 6.1
Private	19.8 3.6	4.5 9.3	0.0 43.1	26.7 -16.5	84.6 -20.8
Gifts					
Public	44.2 17.7	140.0 0.0	183.0 17.6	0.0 N.A.	25.0 10.0
Private	1.2 33.6	25.2 15.5	11.3 4.4	4.2 8.9	6.4 6.0
Student Aid Grants					
Public	10.4 -8.4	22.7 25.8	1.7 -7.7	25.2 22.2	3.0 19.1
Private	5.1 11.0	-25.3 -7.3	-4.8 5.4	5.9 22.3	42.1 67.1
Education and					
General					
Public	5.9 3.2	15.1 6.6	22.3 8.0	-0.1 -8.5	8.2 3.1
Private	4.5 19.1	10.8 7.9	6.6 7.2	10.0 9.9	10.5 6.0
Total					
Public	6.2 -2.5	17.5 7.4	21.1 4.2	-1.4 -16.8	8.5 3.0
Private	2.8 19.9	10.1 7.4	5.5 6.8	9.0 8.5	9.6 4.7

Table C-4: Operating Deficits* Reported by Public Collegiate Institutions, by Carnegie Categories
(In thousands)

Type of Institution	Number of Institutions Reporting (1)	Deficit (2)	Smallest Deficit in Group (4)	Public		Average Deficit (3) ÷ (2)	Deficit as Percent of Total Expenditures
				Largest Deficit in Group (5)			
Leading Research Universities	1	89	89	89		89	3.6
Other Research Universities	5	7,640	232	4,122		1,523	.5
Large Doctorate Granting Inst's.	2	1,849	597	1,252		924	1.7
Small Doctorate Granting Inst's.	2	1,696	80	1,616		843	1.5
Sub-total	10	11,274	80	4,122		1,127	
Comprehensive Colleges	29	15,764	9	5,648		544	2.7
Comprehensive Colleges (limited)	23	5,959	1	970		259	2.5
Sub-total	52	21,723	1	5,648		418	
Selective Liberal Arts Inst's.	--	--	--	--		--	--
Other Liberal Arts Inst's.	4	208	4	154		52	.9
Sub-total	4	208	4	154		52	
Two-year Colleges	177	33,703	21	3,632		190	5.4
Divinity Schools	--	--	--	--		--	--
Medical Schools	3	4,032	1,068	1,801		1,344	1.8
All Other	5	1,054	21	571		211	1.2
Total	251	71,069	1	5,648		287	

Table C-5: Operating Deficits* Reported by Private Collegiate Institutions, by Carnegie Categories
(In thousands)

Type of Institution	Number of Institutions Reporting (7)	Private				Deficit as Percent of Total Expenditures
		Deficit (8)	Smallest Deficit in Group (9)	Largest Deficit in Group (10)	Average Deficit (8) ÷ (7)	
Leading Research Universities	9	29,779	452	10,788	3,309	2.6
Other Research Universities	7	9,507	124	2,690	1,358	2.8
Large Doctorate Granting Inst's.	3	1,200	177	838	400	1.6
Small Doctorate Granting Inst's.	4	3,562	9	3,212	891	3.5
Sub-Total	23	44,048	9	10,788	1,915	
Comprehensive Colleges	30	12,199	3	3,997	407	3.5
Comprehensive Colleges (limited)	9	1,495	15	461	166	4.6
Sub-total	39	13,694	3	3,997	351	
Selective Liberal Arts Inst's.	38	13,097	2	6,075	344	6.4
Other Liberal Arts Inst's.	189	26,489	1	974	140	6.1
Sub-total	227	39,586	1	6,075	174	
Two-year Colleges	94	7,945	205	553	85	9.1
Divinity Schools	80	5,304	1	545	66	7.3
Medical Schools	5	2,439	204	987	488	2.4
All Other	51	6,987	1	1,596	190	6.2
Total	519	120,003	1	10,788	231	6.2

Table C-6: Income for Student Aid Grants Minus Student Aid Grant Expenditures, Reported by Public Collegiate Institutions, 1971-72

(In thousands)

Type of Institution	Public		
	Number of Institutions Reporting	Total Student Aid Grant "Deficit"	Average per Institution S.A.G. "Deficit"
Leading Research Universities	23	96,220	4,183
Other Research Universities	20	21,258	1,063
Large Doctorate Granting Inst's.	19	20,836	1,097
Small Doctorate Granting Inst's.	17	16,788	988
Sub-total	79	155,102	1,963
Comprehensive Colleges	99	42,907	433
Comprehensive Colleges (limited)	51	14,668	288
Sub-total	150	57,575	384
Selective Liberal Arts Inst's.	--	--	--
Other Liberal Arts Inst's.	9	971	108
Sub-total	9	971	108
Two-year Colleges	236	10,458	44
Divinity Schools	--	--	--
Medical Schools	14	6,211	444
All Others	8	980	123
Total			

Table C-7: Income for Student Aid Grants Minus Student Aid Grant Expenditures, Reported by Private Collegiate Institutions, 1971-72

(In thousands of dollars)

Type of Institution	Number of Institutions Reporting	Private	
		Total Student Aid Grant "Deficit"	Average per Institution S.A.G. "Deficit"
Leading Research Universities	17	71,972	4,234
Other Research Universities	17	26,229	1,569
Large Doctorate Granting Inst's.	12	14,847	1,237
Small Doctorate Granting Inst's.	11	13,708	1,246
Sub-total	57	127,196	2,232
Comprehensive Colleges	85	39,918	470
Comprehensive Colleges (limited)	55	13,178	240
Subtotal	140	53,096	379
Selective Liberal Arts Inst's.	129	34,224	265
Other Liberal Arts Inst's.	435	52,589	121
Sub-total	564	86,813	154
Two-year Colleges	117	4,537	39
Divinity Schools	93	2,941	32
Medical Schools	2	154	77
All Others	82	7,080	86

CHAPTER NOTES

FOR CHAPTERS
1, 3, 4, 5, and 7

Chapter 1. Postsecondary Education in a Changing Society

¹This institutional count is based upon the Carnegie Commission Classification system, which counts branch campuses separately. The HEGIS count, which does not count branches, is 2,686 for 1972-73.

²It should be noted that representatives of proprietary school associations argue that proprietary education is only another form of institutional governance and that these are "proprietary collegiate institutions." According to the Association of Independent Schools and Colleges, it has accredited 21 of its members as "operating at the collegiate level." (Letter from Richard A. Fulton, Executive Director, Association of Independent Schools and Colleges, to Donald E. Leonard, Chairman, NCFPE, September 10, 1973.)

³U.S. Office of Education, National Center for Educational Statistics, *Directory of Postsecondary Schools with Occupational Programs 1971* (Washington, D.C., 1973), Table 3, p. xix.

⁴The study of noncollegiate institutions undertaken by this Commission is described in detail in a staff report by T. Youn and R. Thompson.

⁵Abraham Carp, Richard E. Peterson, and Pamela Roelfs, "Learning Interests and Experiences of Adult Americans," mimeographed (Berkeley: Educational Testing Service, 1973), p. 11.

⁶U.S. Office of Education, National Center for Educational Statistics, *Projections of Educational Statistics to 1981-82* (Washington, D.C., 1973), pp. 24-30.

⁷Ibid.

⁸Carnegie Commission on Higher Education, *New Students and New Places: Policies for Future Growth and Development of American Higher Education* (New York: McGraw-Hill, 1971), p. 12.

⁹U.S. Bureau of the Census, *Population Estimates and Projections: Projections of School and College Enrollment, 1971-2000*, Current Population Reports, P-25, no. 473 (Washington, D.C., 1972).

¹⁰Gus W. Haggstrom, "The Growth of Higher Education in the United States," mimeographed (Berkeley, 1970), p. 11.

¹¹U.S. Bureau of the Census, *Population Estimates and Projections*, p. 9.

¹²See U.S. Bureau of the Census, *Population Characteristics*; see also U.S. Bureau of the Census, "Social Characteristics of Students, 1972," unpublished report; Haggstrom, p. 19; and Joseph Froomkin, *Aspirations, Enrollments, and Resources: The Challenge to Higher Education in the Seventies*, U.S. Office of Education report no. OE-50058 (Washington, D.C., 1970).

¹³Letter to NCFPE from Richard A. Fulton, Executive Director, Association of Independent Colleges and Schools, September 19, 1973. See also, August C. Boline, *Occupational Education as a Source of Economic Growth* (Washington, D.C.: U.S. Department of Labor, 1972), p. 208.

¹⁴U.S. Bureau of the Census, *Population Characteristics*, Current Population Reports, P-20, no. 243 (1972).

¹⁵See, for example, Carnegie Commission on Higher Education, *The Purposes and the Performance of Higher Education in the United States: Approaching the Year 2000* (New York: McGraw-Hill, 1973), p. 9.

¹⁶James S. Coleman, *Equality of Educational Opportunity*, U.S. Department of Health, Education and Welfare (Washington, D.C., 1966), pp. 368-79.

¹⁷U.S. Civil Rights Commission, *Undergraduate Enrollment by Ethnic Group in Federally Funded Institutions of Higher Education, Fall 1968 and Fall 1970* (Washington, D.C., 1970).

¹⁸See Norvel Smith, "The Minority Transfer Problem," *The College Board Review* (Spring 1973).

¹⁹U.S. Office of Education, National Center for Educational Statistics, *Digest of Educational Statistics 1972* (Washington, D.C., 1973), Table 87, p. 74.

²⁰U.S. Bureau of the Census, "Rates of College Attendance by Sex," *The Chronicle of Higher Education*.

²¹See Chapter 5, Tables 5-3 and 5-4.

²²U.S. Bureau of the Census, *Population Estimates and Projections*, p. 23.

²³Stanley Moses of the Syracuse Policy Center estimates that enrollment in proprietary schools has risen from 4 million in 1960 to 9.6 million in 1970 and will go to 18.1 million by 1975. These figures are very different from any others uncovered by the Commission, including those obtained from the Commission's own survey of proprietary schools.

²⁴*Higher Education Daily*, Vol. 1, No. 157 (December 1973).

²⁵Frank Newman, et al., *Report on Higher Education*, U.S. Department of Health, Education and Welfare report no. OE-50065 (Washington, D.C., 1971), pp. 1-3.

²⁶Ibid.

²⁷Clark Kerr, "Policy Concerns of the Future," in *The Expanded Campus: Current Issues in Higher Education*, ed. Dyckmar W. Vermilye (San Francisco: Jossey-Bass Publishers, 1972), p. 7.

²⁸T. R. McConnell, Robert O. Berdahl, and Margaret A. Fry, *From Elite to Mass to Universal Higher Education: The British and American Transformations*, Center for Research and Development in Higher Education (Berkeley: University of California Press, 1973), p. 5.

²⁹See, for example, Lewis B. Mayhew, "American Higher Education Now and in the Future," *Annals of the American Academy of Political and Social Sciences* (November 1972), pp. 44-50.

³⁰Ibid., p. 49

³¹Carnegie Commission on Higher Education, *The Purposes and the Performance of Higher Education*.

³²Newman, *Report on Higher Education*.

³³Ibid.

³⁴Samuel B. Gould, "Less Talk, More Action," in *The Expanded Campus*, p. 180.

³⁵Everett Carlil Ladd, Jr., and Seymour M. Lipset, "Unionizing the Professoriate," *Change* (Summer 1973), p. 38.

³⁶Carnegie Commission on Higher Education, *The Fourth Revolution: Instructional Technology in Higher Education* (New York: McGraw-Hill, 1972), p. 1.

³⁷Howard R. Bowen and Gordon K. Douglass, *Efficiency in Liberal Education*, Carnegie Commission on Higher Education (New York: McGraw-Hill, 1971), p. 85.

³⁸Lyman A. Glenny and James R. Kidder, "Trends in State Funding in Higher Education: A Preliminary Report," Education Commission of the States report no. 53 (January 1973), p. 14.

³⁹Ibid.

⁴⁰See, for example, *The Financial Outlook for State and Local Government to 1970*, Tax Foundation Incorporation report no. 28 (New York, 1973), pp. 11-12.

⁴¹See Rothenberg, "Recent Trends in State Taxation," *Book of the States* (1972).

⁴²*The Financial Outlook*, p. 17. See also, *Public Claims on U.S. Output: Federal Budget Options in the Last Half of the Seventies* (American Enterprise Institute, 1973).

Chapter 3. Current Financing Patterns

¹It has been estimated that when the net opportunity cost of going to college is added to the cost of books, supplies, transportation, and other additional living expenses, the combined amount constitutes about two-thirds of the total cost of attending an institution of postsecondary education. When this is added to tuition and fee payments, it is argued, the student and his or her family turn out to have been carrying about three-fourths of the total financial burden. See George H. Hanferd and James E. Nelson, "Federal Student Loan Plans: The Dangers are Real," *College Board Review*, no. 75 (Spring 1970), pp. 16-21.

²For recent discussions of forgone income for students, see Carnegie Commission on Higher Education, in *Higher Education: Who Pays? Who Benefits? Who Should Pay?* (New York: McGraw-Hill, 1973), pp. 49-53. Forgone income calculations by H.R. Bowen and P. Servelle are listed in *Who Benefits from Higher Education and Who Should Pay?* (Washington, D.C.: American Association for Higher Education, 1972). Howard Bowen has given particular emphasis to forgone income as a major element in the cost of education. He estimates that it may now total as much as \$30 billion for all students.

³College Scholarship Service, *How College Students Finance Their Education: A National Survey of the Educational Interests, Aspirations, and Finances of College Sophomores in 1969-70* (Princeton, N.J., 1972), pp. 40-43.

⁴E.W. Haven and D.H. Horch, "How College Students Finance Their Education, 1969-73," mimeographed (Princeton, J.J.: College Entrance Examination Board, 1971).

⁵U.S. Office of Education, *Trends in Postsecondary Education* (Washington, D.C., 1970), p. 100.

⁶Robert F. Carbone, "Is the Nonresident Student Being Treated Fairly?," *College Review*, no. 76 (Summer 1970), pp. 22-23.

⁷Haven and Horch, "How College Students Finance Their Education, 1969-70," p. 10.

⁸This ratio has remained relatively constant until the 1950s, when the new surge of growth in public institutions resulted in a dramatic increase in the share of enrollment in public colleges and universities. At present, 73 percent of total enrollment in the collegiate sector is in public institutions.

⁹Colorado's constitution, for example, has been interpreted to bar grants or scholarships to students who attend private institutions, whether or not such aid is also available to students at public institutions. A recently enacted Nebraska law authorizing state grants of up to \$500 to students attending private colleges was ruled unconstitutional in May 1973 by a county court and is under appeal to the Nebraska Supreme Court. In South Carolina, where 36 percent of the enrollment is in private institutions, most of which have a significant sectarian purpose, an effort to extend state support to those institutions has been stopped, at least temporarily, by a 1972 state supreme court decision ruling unconstitutional any aid to students at sectarian institutions.

¹⁰William H. McFarlane and Charles C. Wheeler, *Legal and Political Issues of State Aid for Private Higher Education* (Atlanta, Georgia: Southern Regional Education Board, 1971), p. 37.

¹¹Pennsylvania State University, the University of Pittsburgh, and Temple University. Pennsylvania also maintains a large state scholarship program and other substantial forms of aid to the state's private institutions.

¹²See Association of American Universities, *Tax Reform and the Crises of Financing Higher Education* (May 1973), pp. 18-25.

¹³John Dale Russel, "The Finance of Higher Education," in *Partnership for Higher Education*, eds. H.R. Kroepsch and D.P. Busch (Boulder, Colo.: Western Interstate Commission for Higher Education, 1967).

¹⁴U.S. Office of Education, HEGIS, *Financial Statistics of Institutions of Higher Education*.

¹⁵Ibid.

¹⁶Eric Ashby, *Any Person, Any Study: An Essay on Higher Education in the United States*, Carnegie Commission on Higher Education (New York: McGraw-Hill, 1971), p. 80.

¹⁷National Science Foundation, *Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1968, 1969, and 1970* (Washington, D.C., 1969).

¹⁸Several of the arguments for federal support for postsecondary education are stated concisely in Edward R. Fried, Alice M. Rivlin, Charles L. Schultze, and Nancy H. Teeters, *Setting National Priorities; The 1974 Budget* (Washington, D.C.: The Brookings Institution, 1973), pp. 146-47.

¹⁹See U.S. Executive Office of the President, Office of Management and Budget, *1972 Catalogue of Federal Domestic Assistance* (Washington, D.C., November 1972). The *1973 Catalogue of Federal Domestic Assistance* has recently become available, but it does not include important cost data and drops several programs for which funds have been impounded by the President.

²⁰There were 432,863 recipients in December 1971, a month that, according to Social Security officials, represents a reasonably reliable indicator for the fiscal year.

²¹Council for Financial Aid to Education, *Voluntary Support of Education, 1971-72* (New York, 1973), p. 4.

²²Contributions to noncollegiate institutions estimated from NCFPE, *Career School Survey*, 1973; American Association of Fund Raising Council, *Giving USA* (New York, 1972), p. 5.

²³See U.S. Office of Education, HEGIS, *Financial Statistics of Institutions of Higher Education (1971-72)*; see also *Voluntary Support 1972*.

²⁴Donaldson, Lufkin, and Jeurette, Inc., *Managing Endowment Capital* (New York, 1972), p. 132.

²⁵U.S. Office of Education, National Center for Educational Statistics, *Digest of Educational Statistics, 1972* (Washington, D.C.: American Council on Education, 1972), pp. 10-11.

²⁶J. Levi and S. Steinbach, *Patterns of Giving to Higher Education II* (Washington, D.C.: American Council on Education, 1972), pp. 10-11.

²⁷*Ibid.*, p. 11.

²⁸*Voluntary Support 1972*, p. 10.

²⁹Council for Financial Aid to Education, *1970 Corporation Support of Higher Education* (New York, 1971), p. 12.

³⁰American Council on Education, *College and University Business Administration* (Washington, D.C., 1968).

Chapter 4. Assessing the Impact of Current Financing Programs

¹See Dorothy Gies McGuigan, *A Dangerous Experiment* (Ann Arbor: Center for Continuing Education of Women, 1970).

²U.S. Office of Education, *Digest of Educational Statistics, 1972*, report no. OE 73-11103 (Washington, D.C., 1973), Table 117, p. 103. See also, College Entrance Examination Board, *Report of the Commission on Tests, "Righting the Balance," Vol. I* (New York, 1970); and John A. Creager, et al., *National Norms for Entering College Freshmen, Fall 1969* (Washington, D.C.: American Council on Education, 1969), p. 51.

³Carnegie Commission on Higher Education, *Opportunities for Women in Higher Education: Their Current Participation, Prospects for the Future, and Recommendations for Action* (New York: McGraw-Hill, 1973), p. 54.

⁴See Lucy Sells, "Pilot Test of Sex Differences in High School Mathematics Preparation," Department of Sociology, University of California, Berkeley, 1973. See also, U.S. Department of Health, Education and Welfare, Commissioner's Task Force on the Impact of Office of Education Programs on Women, "A Look at Women in Education: Issues and Answers for HEW," mimeographed (Washington, D.C., November 1972). And see Cynthia L. Attwood, *Women in Fellowship and Training Programs* (Washington, D.C.: Association of American Colleges, 1971).

⁵U.S. Congressional Record, 92nd Congress, 2nd Session, 1972, Vol. 118, no. 28, p. S 2699, citing the study of E.W. Haven and D.H. Horch, *How College Students Finance Their Education* (New York: College Entrance Examination Board, 1972).

⁶U.S. Office of Education, *Digest of Educational Statistics, 1972*, Table 98, p. 83.

⁷College Entrance Examination Board, *Barriers to Higher Education* (New York, 1971), p. 11.

⁸See, for example, Milton Schwebel, "Pluralism and Diversity in America," *Annals of Political and Social Sciences* (November 1972), pp. 88-100.

⁹Several reports and studies concur on this view. Harold L. Hodgkinson's *Institutions in Transition: A Profile of Change in Higher Education* (1971) is an excellent example for demonstrating this point. Some major national commission reports such as *The Report on Higher Education* (1971), the report of The Commission on Post-secondary Education in Ontario (1972), and the Carnegie Commission report *Reform on Campus* (1973) share this view.

¹⁰Frank Newman, et al., *Report on Higher Education*, U.S. Department of Health, Education, and Welfare Report No. OE-50065 (Washington, D.C., 1971), pp. 33-35.

¹¹Ann S. Heiss, *An Inventory of Academic Innovation and Reform* (Berkeley: Carnegie Commission on Higher Education, 1973).

¹²Carnegie Commission on Higher Education, *New Students and New Places* (New York: McGraw-Hill, 1971), p. 6.

¹³Harold L. Hodgkinson, *Institutions in Transition: A Profile of Change in Higher Education* (New York: McGraw-Hill, 1971).

¹⁴See Ivan Illich, *De-Schooling Society* (New York, 1971).

¹⁵Allan M. Cartter, *An Assessment of Quality in Graduate Education: A Comparative Study of Graduate Departments in 29 Academic Disciplines* (Washington, D.C.: American Council on Education, 1966).

¹⁶Kenneth D. Roose and Charles J. Andersen, *A Rating of Graduate Programs* (Washington, D.C.: American Council on Education, 1970), p. 111.

¹⁷Jack Gourman, *The Gourman Report Confidential Ratings of American Colleges* (The Continuing Education Institute, Inc., 1967-68).

¹⁸David G. Brown, *The Mobile Professors* (Washington, D.C.: American Council on Education, 1967).

¹⁹ See Carnegie Commission on Higher Education, *Reform on Campus: Changing Students, Changing Academic Programs* (New York: McGraw-Hill, 1972).

²⁰ Frank G. Dickey and Jerry W. Miller, *A Current Perspective on Accreditation* (Washington, D.C.: American Association for Higher Education, 1972), p. 57.

Chapter 5. *The Incidence of Financial Distress Among Institutions of Postsecondary Education*

¹ E.F. Cheit, *The New Depression in Higher Education* (New York: McGraw-Hill, 1971).

² Carnegie Commission on Higher Education, *The More Effective Use of Resources: An Imperative for Higher Education* (New York: McGraw-Hill, 1972), p. ix.

³ M.D. Orwig, ed., *Financing Higher Education: Alternatives for the Federal Government* (Iowa City, Iowa: The American College Testing Program, 1971); President's Commission on Higher Education, *Higher Education for American Democracy: A Report* (New York: Harper & Row, 1948).

⁴ The President's Committee on Education Beyond High School (Eisenhower Report), *First Interim Report to the President* (July 1956); *Second Report to the President* (July 1957).

⁵ Important studies of state surveys of the financial situation of higher education include: *An Assessment and Projection of the Resources and Needs of Independent Higher Education in Connecticut*, ERIC document ED 059668 (Connecticut Commission on Higher Education, March 1971); *Assessment of the Impact of Budgeting Restrictions During Fiscal Years 1971-72 and 1972-73*, submitted to the Illinois Board of Higher Education (University of Illinois, May 1972); *Budgeting and Resource Allocation at Princeton University* (Princeton, New Jersey, June 1972); James C. Byrnes and Dale A. Tussing, *Financial Crisis in Higher Education: Past, Present, Future*, ERIC document ED 61896 (Syracuse University Research Corporation, December 1971); California Legislature, *Draft Report of the Joint Committee on the Master Plan for Higher Education* (Sacramento, California, 1973);

Commission on the Financing of Higher Education, State of Illinois, *A Report to the Board of Higher Education* (Illinois, 1972); Massachusetts School Committee for the Study of Financial Problems of Private Institutions of Higher Education, *Financial Problems of Massachusetts Private Higher Education* (January 1970); *The Financial Problems of Private Colleges and Universities in New York State: An Interim Report*, ERIC document ED 058841 (New York State Education Department, April 1971); *Financing Higher Education Needs in the Decade Ahead: A Statement of Policy and Proposed Action by the Regents of the University of the State of New York* (Albany, New York: The State Education Department, January 1972); Seymour E. Harris, *A Statistical Portrait of Higher Education* (Berkeley: Carnegie Commission on Higher Education, 1972); *Institutional Response to Financial Stress: Stop-gap Measures or Fundamental Change?*, ERIC document ED 58860 (Southern Regional Education Board, 1971); Calvin B. Lee and Alexander W. Astin, *The Invisible Colleges: A Profile of Small, Private Colleges with Limited Resources* (Berkeley: Carnegie Commission on Higher Education, 1972); *A Plan of Action for Financing Higher Education in the State of New York*, ERIC document ED 057746 (Commission on Independent Colleges and Universities of the State of New York, December 1971); *Private Higher Education in North Carolina: Conditions and Prospects*, ERIC document ED 058845 (North Carolina State Board of Higher Education, April 1971); *Proceedings: A Symposium on Financing Higher Education* (Southern Regional Education Board, June 1969); Barbara Radloff, "The Financial Woes of New York University," *Change* (October 1972), pp. 15-18; *The University's 1973-74 Budget: Memorandum* (The University of Chicago, October 1973); *Update Study of the Financial Condition of Independent Higher Education in the Commonwealth of Pennsylvania*, ERIC document ED 060812 (Commission for Independent Colleges and Universities, February 1972); *Washington Private Higher Education: It's Future and the Public's Interest*, ERIC document ED 059700 (Washington State Council on Higher Education, 1971).

⁶ Carven Hudgins, et al., *People's Colleges in Trouble: A Financial Profile of the Nation's State Universities and Land-Grant Colleges*; W. Jellema, *The Red and the Black* (Washington, D.C., Association of American Colleges, 1971); W. Jellema, *From Red to Black?* (San Francisco: Jossey-Bass Publishers, 1973).

⁷ Jellema, *From Red to Black?*, pp. 19-23.

⁸ Cheit, *The New Depression in Higher Education*; Cheit, *The New Depression in Higher Education-Two Years Later* (Berkeley: Carnegie Commission on Higher Education, 1973).

- ⁹ Cheit, *The New Depression-Two Years Later*, p. 2.
- ¹⁰ Robert H. Atwell, *The Adjustment of the Major National Universities to Budgetary Distress*, unpublished manuscript (Washington, D.C.: Association of American Universities, August 1973).
- ¹¹ Joseph Froomkin, et al., *The Financial Prospects of the Post-secondary Sector, 1975 to 1990* (Washington, D.C.: Joseph Froomkin, Inc., November 1973), p. iii.
- ¹² John Lombardi, *The Financial Crisis in the Community College*, ERIC document ED 58875 (February 1972); Lombardi, *Managing Finances in Community Colleges* (San Francisco: Jossey-Bass Publishers, 1973).
- ¹³ Frederick E. Balderston, "Varieties of Financial Crisis," in *Universal Higher Education*, ed. Logan Wilson and Olive Mills (Washington, D.C.: American Council on Education, 1972), p. 90; Alice Rivlin, *Toward a Long Range Plan for Federal Financial Support for Higher Education: A Report to the President*, U.S. Department of Health, Education, and Welfare (Washington, D.C., 1969).
- ¹⁴ *The Cost of College*, Vol. II (Cambridge, Mass.: Columbia Research Associates, 1972), p. 6.
- ¹⁵ *The Chronicle of Higher Education* (March 12, 1973).
- ¹⁶ Carnegie Commission on Higher Education, *Priorities for Action: Final Report of the Carnegie Commission on Higher Education* (New York: McGraw-Hill, 1973); *The Management and Financing of Colleges* (New York: Committee for Economic Development, 1973).
- ¹⁷ *The Chronicle of Higher Education* (November 5, 1973).
- ¹⁸ G. Richard Wynn, "Construction of a Higher Education Cost Index to Measure the Changing Purchasing Power of Educational Institutions," unpublished manuscript (Ann Arbor: University of Michigan, 1973); *Higher Education Price Deflator*, Bureau of Economic Analysis (Washington, D.C.).

¹⁹G. Richard Wynn, "Liberal Arts College Pricing: Has the Market Taken Over?," *Liberal Education*, Vol. LVIII, no. 3 (October 1972); Carnegie Commission on Higher Education, *The More Effective Use of Resources*; The President's Committee on Education Beyond High School, *First Interim Report and Second Report to the President*.

²⁰See discussion of student aid in Chapter 3.

²¹See Table 3, Chapter 4.

²²Hans H. Jenny, *The Consolidated Net Worth of Private Colleges: Recommendation of a Model* (Wooster, Ohio: The College of Wooster, May 1973); Daniel D. Robinson, "Accounting Principles and Financial Statements," NACUBO Professional File (May 1973); William M. Wilkinson, "The University Treasurer's Report Can Make Sense Without Abandoning Fund Accounting or Stewardship," NACUBO Studies in Management (June 1973).

²³P.H. Abelson, "Blow-Hot, Blow-Cold Educational Policies," *Science* (April 1973).

²⁴"Budget Crisis for 1973-74," memorandum for the School of Public Health (Ann Arbor, Michigan: University of Michigan, February 1973).

²⁵Vaughn E. Huckfeldt, *Change in Higher Education Management* (National Center for Higher Education Management Systems); John D. Millett, *Financing Current Operations of American Higher Education* (Washington, D.C.: Academy for Educational Development in Management Division, 1972); Alexander M. Mood, et al., *Papers on Efficiency in the Management of Higher Education* (Berkeley: Carnegie Commission on Higher Education, 1972).

Chapter 7. An Analysis of Alternative Financing Plans

¹Carnegie Commission assumes an average annual rate of increase in tuition of 5.8 percent per year, the same as the ten year actual growth in per capita disposable income. The same value of 5.8 percent was used for both institutional cost inflation and tuition price inflation to avoid building in an assumed cost income differential that would inevitably lead to financial distress. It is important to bear in mind that the 5.8 percent does not refer to general economic inflation but to the particular mix of goods and services purchased by postsecondary educational institutions.

²Stephen A. Hoenack, W.C. Weiler, and Charles C. Orvis, "Cost-related Tuition Policies and University Enrollments," mimeographed (Management Information Division, University of Minnesota, 1973); Stephen A. Hoenack, "The Efficient Allocation of Subsidies to College Students," *American Economics Review*, Vol. 61 (June 1971), pp. 302-311; Stephen A. Hoenack and Paul Feldman, "Private Demand for Higher Education," *Economics and Financing of Higher Education in the United States*, Joint Economic Committee (1969), pp. 375-398; A.J. Corrazzini, et al., "Determinants and Distributional Effect of Enrollment in U.S. Higher Education," *Journal of Human Resources*, Vol. III, No. 1 (Winter 1972), pp. 39-59; R. Campbell and B.N. Siegel, "Demand for Higher Education in the United States," *American Economic Review*, Vol. 57 (June 1967), pp. 482-494; Leonard S. Miller, "Demand for Higher Education in the United States," unpublished paper presented to the National Bureau of Economic Research Conference on Education as an Industry (June 1971); David Mundel, C. Manski, and Meir G. Kohn, *A Study of College Choice*, unpublished paper presented to Economists Society (December 1972); R. Radner and L.S. Miller, "Economics of Education: Demand and Supply in U.S. Higher Education: A Progress Report," *American Economics Review* (May 1970), pp. 326-334.

³A supplementary staff report will describe an expanded form of this analytical model; it will make provision for changes in other forms of student aid, although there are not adequate data to perform all the calculations.

⁴The reader may find these publications by the National Center for Higher Education Management Systems (Boulder, Colorado) useful: Vaughn Huckfeldt, *A Federal Planning Model for Analysis of Accessibility to Higher Education: An Overview* (1973); Vaughn Huckfeldt, George Weathersby, and Wayne Kirschling, *A Design for A Federal Planning Model for Analysis of Accessibility to Higher Education* (1973); Kent Weldon and Vaughn Huckfeldt, *Prototype Software for A Federal Planning Model for Analysis of Accessibility to Higher Education* (1973); Kent Weldon and Vaughn Huckfeldt, *Preliminary Operating Instructions for a Federal Planning Model for Analysis of Accessibility to Higher Education* (1973); Vaughn Huckfeldt, *Preliminary Test Reports from a Federal Planning Model for Analysis of Accessibility to Higher Education* (1973); Vaughn Huckfeldt, *Preliminary Data for a Federal Planning Model for Analysis of Accessibility to Higher Education* (1973).

⁵Other specific financing mechanisms reviewed by the Commission include the College Endowment Financing Plan suggested by the Moton Foundation.